

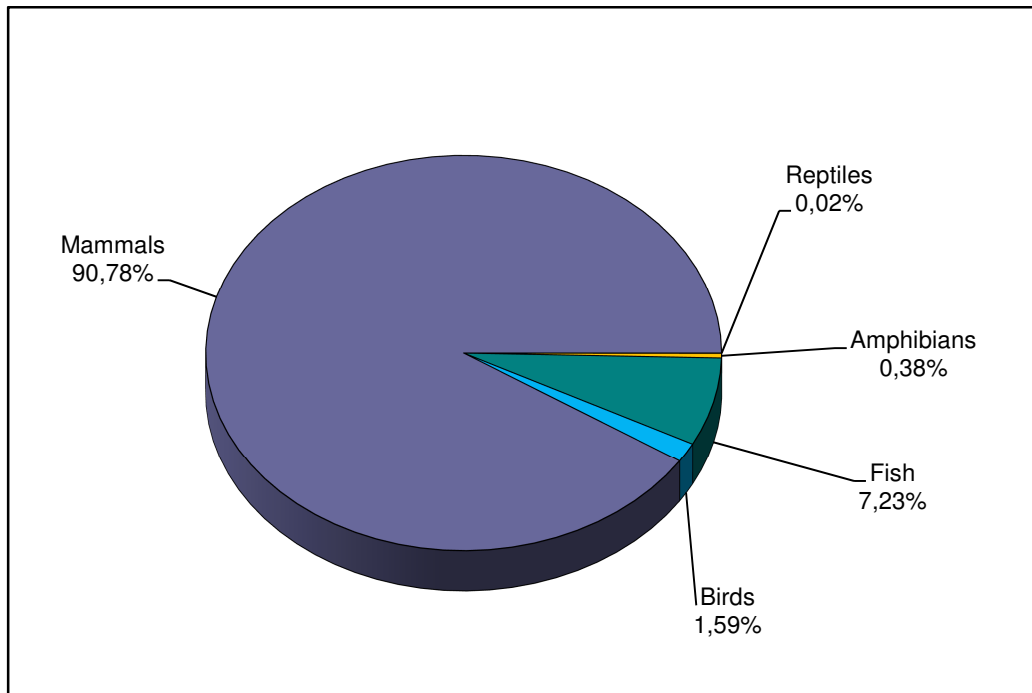
**1. Animals used by species<sup>1</sup>****Table 1: In total animals used by species**

Animal Species	Number of Animals	%
Mice	2.005.097	72.83%
Rats	320.629	11.65%
Guinea-Pigs	18.523	0.67%
Hamsters (Syrian)	1.403	0.05%
Hamsters (Chinese)	30	0.00%
Mongolian gerbil	4.883	0.18%
Other Rodents	13.343	0.48%
Rabbits	107.652	3.91%
Cats	502	0.02%
Dogs	2.437	0.09%
Ferrets	207	0.01%
Other carnivores	686	0.02%
Horses. donkeys & cross-breeds	1.252	0.05%
Pigs	12.279	0.45%
Goats	942	0.03%
Sheep	1.719	0.06%
Cattle	3.762	0.14%
Prosimians	78	0.00%
Marmoset and tamarins	228	0.01%
Cynomolgus monkey	2.075	0.08%
Rhesus monkey	26	0.00%
Baboons	6	0.00%
Other Mammals	1.523	0.06%
Domestic fowl	29.703	1.08%
Other birds	13.970	0.51%
Reptiles	453	0.02%
Rana	143	0.01%
Xenopus	6.943	0.25%
Other Amphibians	3.305	0.12%
Zebra fish	118.423	4.30%
Other Fish	80.749	2.93%
Cephalopods	80	0.00%
<b>Total</b>	<b>2.753.051</b>	<b>100.00%</b>

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<sup>1</sup> Excludes re-use

**Figure 1: Animals used by species groups**



**Table 2: Animals used by species groups**

Species grouping Level 1	Number of Animals
Warm-blooded vertebrates	2.542.955
Cold-blooded vertebrates	210.016
Invertebrates	80
<b>Total</b>	<b>2.542.955</b>

Mammals	Number of Animals
Rodents	2.363.908
Rabbits	107.652
Carnivores	3.832
Equidae	1.252
Artiodactyla	18.702
Non-human primates	2.413
Other mammals	1.523
<b>Total</b>	<b>2.499.282</b>

Species grouping Level 2	Number of Animals
Mammals	2.499.282
Birds	43.673
Fish	199.172
Amphibians	10.391
Reptiles	453
Cephalopods	80
<b>Total</b>	<b>2.753.051</b>

Non-human primates	Number of Animals
Prosimians	78
New World Monkeys	228
Old World Monkeys	2.107
<b>Total</b>	<b>2.413</b>

## 2. Origin of used Animals<sup>2</sup>

Table 3: Origin of used animals in total

	Animals born in				Total
	the EU at a registered breeder	the EU but not at a registered breeder	rest of Europe	rest of the world	
Mice	1.950.849	45.795	318	8.135	2.005.097
Rats	315.442	2.370	55	2.762	320.629
Guinea-Pigs	18.406	117			18.523
Hamsters (Syrian)	1.403				1.403
Hamsters (Chinese)	30				30
Mongolian gerbil	4.525	290		68	4.883
Other Rodents	911	12.432			13.343
Rabbits	106.486	300		866	107.652
Cats	215	97		190	502
Dogs	389	789		1.259	2.437
Ferrets	145	24		38	207
Other carnivores	413	269	4		686
Horses, donkeys & cross-breeds	304	948			1.252
Pigs	9.131	3.148			12.279
Goats	61	881			942
Sheep	759	960			1.719
Cattle	1.959	1.803			3.762
Prosimians	78				78
Marmoset and tamarins	234				234

<sup>2</sup> Excludes re-use

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Cynomolgus monkey	94			1.981	<b>2.075</b>
Rhesus monkey	31			0	<b>31</b>
Baboons	6				<b>6</b>
Other Mammals	300	1.195		28	<b>1.523</b>
Domestic fowl	24.167	5.536			<b>29.703</b>
Other birds	6.837	6.731	99	303	<b>13.970</b>
Reptiles	7	218		228	<b>453</b>
Rana	10	133			<b>143</b>
Xenopus	5.245	50		1.648	<b>6.943</b>
Other Amphibians	1.437	1629		239	<b>3.305</b>
Zebra fish	104.093	14.330			<b>118.423</b>
Other Fish	53.388	14.950	11.243	1.168	<b>80.749</b>
Cephalopods		48	32		<b>80</b>
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>	<b>2.753.062</b>

Table 4 – 6: Origin of used animals by species groups

	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 the world	Total
Warm-blooded vertebrates	2.443.175	83.685	476	15.630	<b>2.542.966</b>
Cold-blooded vertebrates	164.180	31.310	11.243	3.283	<b>210.016</b>
Invertebrates		48	32		<b>80</b>
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>	<b>2.753.062</b>

	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 the world	Total
Mammals	2.412.171	71.418	377	15.327	<b>2.499.293</b>
Birds	31.004	12.267	99	303	<b>43.673</b>
Fish	157.481	29.280	11.243	1.168	<b>199.172</b>
Amphibians	6.692	1.812		1.887	<b>10.391</b>
Reptiles	7	218		228	<b>453</b>
Cephalopods		48	32		<b>80</b>
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>	<b>2.753.062</b>

	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 the world	Total
Rodents	2.291.566	61.004	373	10.965	<b>2.363.908</b>
Rabbits	106.486	300		866	<b>107.652</b>
Carnivores	1.162	1.179	4	1.487	<b>3.832</b>
Equidae	304	948			<b>1.252</b>
Artiodactyla	11.910	6.792			<b>18.702</b>
Non-human primates	443			1.981	<b>2.424</b>
Other mammals	300	1.195		28	<b>1.523</b>
<b>Total</b>	<b>2.412.171</b>	<b>71.418</b>	<b>377</b>	<b>15.327</b>	<b>2.499.293</b>

### 3. Non-Human Primates by source and generation<sup>3</sup>

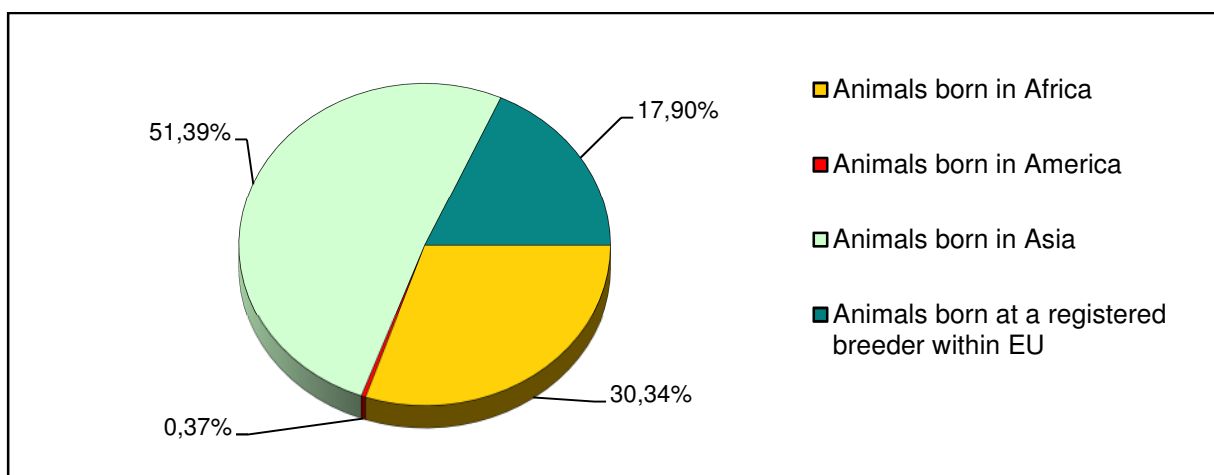
Table 7: Generation of non-human primates

NHP Generation	Number of Animals
F0	0
F1	508
F2 or greater	1.210
Self-sustaining colony	695
<b>Total</b>	<b>2.413</b>

Table 8: Origin of non-human primates

NHP Source (origin)	Number of Animals
Animals born at a registered breeder within EU	432
Animals born in rest of Europe	0
Animals born in Asia	1.240
Animals born in America	9
Animals born in Africa	732
Animals born elsewhere	0
<b>Total:</b>	<b>2.413</b>

Figure 2: Origin of non-human primates (%)



<sup>3</sup> Excludes re-use

#### 4. Use of species in procedures by purposes

Table 9: Use of species in procedures by purposes

	Basic Research	Translational and applied research	Regulatory use and 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	Maintenance of colonies of established genetically altered animals, not used in other procedures	Total
Mice	1.373.326	293.804	271.845	74	6.906	33.871	4	51.508	2.031.338
Rats	88.488	52.107	171.861		138	12.569	23	1.047	326.233
Guinea-Pigs	916	3.517	13.935			440	1		18.809
Hamsters (Syrian)	19	660	646			84			1.409
Hamsters (Chinese)			30						30
Mongolian gerbil	1.544	1.713	1.713			288			5.258
Other Rodents	2.973	1.836	8.258	149		182			13.398
Rabbits	1.774	1.182	108.471			291			111.718
Cats	111	296	663			42			1.112
Dogs	433	1.022	2.880	6		150			4.491
Ferrets	55	182							237
Other carnivores	187	2	497						686
Horses, donkeys & cross-breeds	1.255	158	23			89			1.525
Pigs	3.211	4.233	3.885	52		1.831	1		13.213
Goats	70	757	55			71			953
Sheep	339	1.413	276			299			2.327

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Cattle	1.341	1.525	1.042			242			4.150
Prosimians	102								102
Marmoset and tamarins	135	3	160			6			304
Cynomolgus monkey	65	169	2.447			2			2.683
Rhesus monkey	27	13				5			45
Baboons		6							6
Other species of Old World Monkeys		1							1
Other Mammals	932	156	155	115	19	213			1.590
Domestic fowl	8.486	8.123	11.912		816	537			29.874
Other birds	8.444	4.023	1.459		141	219	11		14.297
Reptiles	406		300	43		8			757
Rana		1	132			10			143
Xenopus	7.596	90				546			8.232
Other Amphibians	2.258	18	60	951		18			3.305
Zebra fish	99.437	1.285	16.967	954		1.535		700	120.878
Other Fish	39.297	3.155	10.583	3.667	21.778	2.297			80.777
Cephalopods	32					48			80
<b>Total</b>	<b>1.643.259</b>	<b>381.450</b>	<b>630.255</b>	<b>6.011</b>	<b>29.798</b>	<b>55.893</b>	<b>40</b>	<b>53.255</b>	<b>2.799.961</b>



Figure 3: Use of animals in procedures by purposes

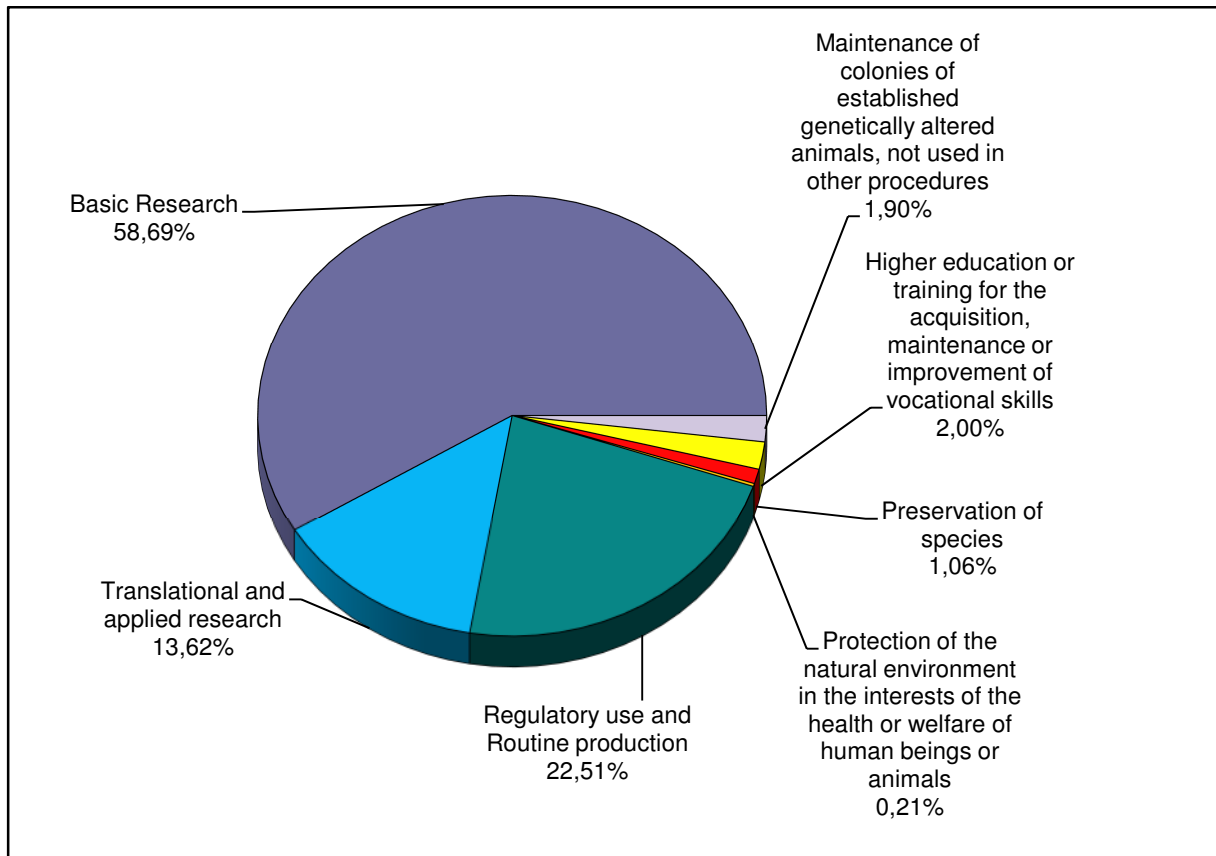


Table 10: Use of species in basic research purposes

	Oncology	Cardio-vascular 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
Mice	103.410	129.750	259.571	40.040	43.849	16.343	381.913	23.526	40.705	62.332	105.184	2.194	164.509	<b>1.373.326</b>
Rats	952	23.635	40.074	2.668	3.085	1.835	5.875	1.470	1.677	1.699	1.393	227	3.898	<b>88.488</b>
Guinea-Pigs	72	48	29	31	204		143		340			35	14	<b>916</b>
Hamsters (Syrian)			19											<b>19</b>
Mongolian gerbil			1.179		49		74		242				0	<b>1.544</b>
Other Rodents	103		275		7			20	9	207	5	2.347	0	<b>2.973</b>
Rabbits	51	499	30	37	22	76	6	144	105	189	148	5	462	<b>1.774</b>
Cats			7					14	44	30			16	<b>111</b>
Dogs		18	142		2	143	2	8	35	9	74			<b>433</b>
Ferrets			53	2										<b>55</b>
Other carnivores								4				173	10	<b>187</b>
Horses, donkeys & cross-breeds				31	88	96	17	80	621	86	25	4	207	<b>1.255</b>
Pigs	74	321	89	113	249	57	416	20	2	344	114	462	950	<b>3.211</b>
Goats											5	59	6	<b>70</b>
Sheep		19	33		32	129	33				21	28	44	<b>339</b>
Cattle		6	2		108		166	456		297	225	47	34	<b>1.341</b>

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Prosimians			41									61		<b>102</b>
Marmoset and tamarins			22	42				54			17			<b>135</b>
Cynomolgus monkey			65											<b>65</b>
Rhesus monkey			21											<b>21</b>
Other Mammals			79			6	97	17	9	14	2	567	141	<b>932</b>
Domestic fowl			605		643	120	1.124	2	117	223	4	50	5.598	<b>8.486</b>
Other birds		35	174		255	5	1.133	30	10			6.736	66	<b>8.444</b>
Reptiles			362	30								14		<b>406</b>
Xenopus	100	91	3.363	50	28	44		186	89	542	393	245	2.465	<b>7.596</b>
Other Amphibians		200	206			433		0				570	849	<b>2.258</b>
Zebra fish	1.527	28.779	24.829		380	10.121	3.582	4.068	4.844	10.687	2.557	836	7.227	<b>99.437</b>
Other Fish	3.935		933	3			1.328	1.456	3.030	134	2.399	19.246	6.833	<b>39.297</b>
											32			<b>32</b>
<b>Total</b>	<b>110.224</b>	<b>183.401</b>	<b>332.203</b>	<b>43.053</b>	<b>49.001</b>	<b>29.408</b>	<b>395.909</b>	<b>31.555</b>	<b>51.879</b>	<b>76.793</b>	<b>112.598</b>	<b>33.906</b>	<b>193.329</b>	<b>1.643.259</b>
<b>%</b>	<b>6.71%</b>	<b>11.16%</b>	<b>20.22%</b>	<b>2.62%</b>	<b>2.98%</b>	<b>1.79%</b>	<b>24.09%</b>	<b>1.92%</b>	<b>3.16%</b>	<b>4.67%</b>	<b>6.85%</b>	<b>2.06%</b>	<b>11.76%</b>	<b>100%</b>

**Table 11: Use of species in translational and applied research purposes**

	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	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
Mice	127.486	21.493	19.029	43.379	11.945	7.783	2.510	19.608	6.964	2.527	16.686	1.969	4.512	561	2.999		4.353	<b>293.804</b>
Rats	1.653	339	7.367	15.135	3.555	2.343	1.941	2.128	1.322	813	9.155	766	805	30	230	15	4.510	<b>52.107</b>
Guinea-Pigs	2	264	280	340	1.670		9			192			59	240	365		96	<b>3.517</b>
Hamsters (Syrian)	26	572		52					4	6								<b>660</b>
Mongolian gerbil		1.069			11					12			621					<b>1.713</b>
Other Rodents		1.764											68		4			<b>1.836</b>
Rabbits	31	51	176	34	1	36	125	10		52	201		271		173	21		<b>1.182</b>
Cats													296					<b>296</b>
Dogs	20		12	119	90		2			1	51	8	643	4	52		20	<b>1.022</b>
Ferrets		162											20					<b>182</b>
Other carnivores													2					<b>2</b>
Horses, donkeys & cross-breeds							15	5					79	35	24			<b>158</b>
Pigs	98	42	255	7	108	94	37	8	3	21	63	186	2.303	462	100		446	<b>4.233</b>
Goats													750		7			<b>757</b>
Sheep	11	8	113	29	23		271						258		700			<b>1.413</b>

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Cattle													966	482	77			<b>1.525</b>
Marmoset and tamarins		2									1							<b>3</b>
Cynomolgus monkey			38	17	32			30			39	1					12	<b>169</b>
Rhesus monkey	3	6									4							<b>13</b>
Baboons			6															<b>6</b>
Other species of Old World Monkeys		1																<b>1</b>
Other Mammals		86						21					4	45				<b>156</b>
Domestic fowl		93											4.470	3.516	44			<b>8.123</b>
Other birds													3.922	86	15			<b>4.023</b>
Rana																	1	<b>1</b>
Xenopus		5	44	25						12							4	<b>90</b>
Other Amphibians				18														<b>18</b>
Zebra fish			392	109						695							89	<b>1.285</b>
Other Fish													624	808			1.723	<b>3.155</b>
<b>Total</b>	<b>129.330</b>	<b>25.957</b>	<b>27.712</b>	<b>59.264</b>	<b>17.435</b>	<b>10.256</b>	<b>4.910</b>	<b>21.789</b>	<b>8.314</b>	<b>4.331</b>	<b>26.200</b>	<b>2.930</b>	<b>20.673</b>	<b>6.269</b>	<b>4.790</b>	<b>36</b>	<b>11.254</b>	<b>381.450</b>
<b>%</b>	<b>33.90%</b>	<b>6.80%</b>	<b>7.26%</b>	<b>15.54%</b>	<b>4.57%</b>	<b>2.69%</b>	<b>1.29%</b>	<b>5.71%</b>	<b>2.18%</b>	<b>1.14%</b>	<b>6.87%</b>	<b>0.77%</b>	<b>5.42%</b>	<b>1.64%</b>	<b>1.26%</b>	<b>0.01%</b>	<b>2.95%</b>	<b>100%</b>

Table 12: Regulatory use of animals and routine production purposes

	Quality control (incl batch safety and potency test- ing)	Other efficacy and tolerance testing	Toxicity and other safety testing includ- ing pharma- cology	Routine pro- duction	Total
Mice	137.844	36.002	94.054	3.945	<b>271.845</b>
Rats	63.578	3.642	103.875	766	<b>171.861</b>
Guinea-Pigs	8.518	73	5.335	9	<b>13.935</b>
Hamsters (Syrian)	350		296		<b>646</b>
Hamsters (Chinese)			30		<b>30</b>
Mongolian gerbil			1.546	167	<b>1.713</b>
Other Rodents			8.258		<b>8.258</b>
Rabbits	14.284	10	6.662	87.515	<b>108.471</b>
Cats	147	69	429	18	<b>663</b>
Dogs		272	2.608		<b>2.880</b>
Other carnivores	235	120	142		<b>497</b>
Horses, donkeys & cross-breeds	4		19		<b>23</b>
Pigs	567	2.365	918	35	<b>3.885</b>
Goats			50	5	<b>55</b>
Sheep	52	16	134	74	<b>276</b>
Cattle	466	264	299	13	<b>1.042</b>
Marmoset and tamarins			160		<b>160</b>
Cynomolgus mon- key			2.447		<b>2.447</b>
Other Mammals		63	77	15	<b>155</b>
Domestic fowl	9.348	2.323	192	49	<b>11.912</b>
Other birds		138	1.321		<b>1.459</b>
Reptiles				300	<b>300</b>
Rana			132		<b>132</b>
Other Amphibians			60		<b>60</b>
Zebra fish			16.967		<b>16.967</b>
Other Fish			10.583		<b>10.583</b>
<b>Total</b>	<b>235.393</b>	<b>45.357</b>	<b>256.594</b>	<b>92.911</b>	<b>630.255</b>
<b>%</b>	<b>37.35%</b>	<b>7.20%</b>	<b>40.71%</b>	<b>14.74%</b>	<b>100%</b>

Table 13: Use of animals in quality control purposes

	Batch safety testing	Pyrogenicity testing	Batch potency testing	Other quality controls	Total
Mice	25.705		112.139		137.844
Rats	4.316		59.262		63.578
Guinea-Pigs	3.603		4.906	9	8.518
Hamsters (Syrian)			350		350
Rabbits	209	6.992	7.042	41	14.284
Cats	50		97		147
Other carnivores	235				235
Horses, donkeys & cross-breeds	0		4		4
Pigs	377		150	40	567
Sheep			52		52
Cattle	34		432		466
Domestic fowl	9.260			88	9.348
<b>Total</b>	<b>43.789</b>	<b>6.992</b>	<b>184.434</b>	<b>178</b>	<b>235.393</b>
<b>%</b>	<b>18.60%</b>	<b>2.97%</b>	<b>78.35%</b>	<b>0.08%</b>	<b>100%</b>

Table 14: Use of animals in routine production purposes

	Blood based products	Monoclonal antibodies	Other product types	Total
Mice	8	1098	2.839	3.945
Rats	10	385	371	766
Guinea-Pigs			9	9
Mongolian gerbil			167	167
Rabbits	86.084	16	1.415	87.515
Cats			18	18
Pigs	12		23	35
Goats	5			5
Sheep	61	1	12	74
Cattle			13	13
Other Mammals			15	15
Domestic fowl	24		25	49
Reptiles			300	300
<b>Total</b>	<b>86.204</b>	<b>1.500</b>	<b>5.207</b>	<b>92.911</b>
<b>%</b>	<b>92.78%</b>	<b>1.61%</b>	<b>5.60%</b>	<b>100%</b>

Table 15: Use of animals in toxicity and other safety testing by test type purposes

	Acute and sub-acute	Skin irritation/corrosion	Skin sensitisation	Repeated dose toxicity	Carcinogenicity	Genotoxicity	Reproductive toxicity	Developmental toxicity	Neurotoxicity	Kinetics	Pharmacodynamics	Phototoxicity	Ecotoxicity	Target animal safety	Eye irritation/corrosion	Other toxicity/safety testing	Total
Mice	2.800		6.091	6.386	1.262	3.299	32			20.957	50.535		280	564		1.848	94.054
Rats	3.460	41	12	13.582	3.923	787	21.866	1.1657	90	13.780	33.451	12		60		1.154	103.875
Guinea-Pigs	2		5.008							44	193					88	5.335
Hamsters (Syrian)		31		142						23	100						296
Hamsters (Chinese)						30											30
Mongolian gerbil											1546						1.546
Other Rodents													5089	314		2855	8.258
Rabbits	84	803	59	276		58	299	2.449		366	1.891				225	152	6.662
Cats										305	77			23		24	429
Dogs	62			739						1.267	484			36		20	2.608
Other carnivores	58													84			142
Horses, donkeys & cross-breeds										19							19
Pigs	26	19		141						245	308			167		12	918
Goats										50							50
Sheep										57	21					56	134
Cattle										160	20			3		116	299
Marmoset and tamarins				42						35	22					61	160
Cynomolgus monkey				1.461			191	113		351	50					281	2.447



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Other Mammals														77			<b>77</b>
Domestic fowl										12			15	165			<b>192</b>
Other birds	40									21			1.260				<b>1.321</b>
Rana													132				<b>132</b>
Other Amphibians													60				<b>60</b>
Zebra fish								800					16.167				<b>16.967</b>
Other Fish	2.076												8.391	108		8	<b>10.583</b>
<b>Total</b>	<b>8.608</b>	<b>894</b>	<b>11.170</b>	<b>22.769</b>	<b>5.185</b>	<b>4.174</b>	<b>22.388</b>	<b>15.019</b>	<b>90</b>	<b>37.692</b>	<b>88.698</b>	<b>12</b>	<b>31.394</b>	<b>1601</b>	<b>225</b>	<b>6.675</b>	<b>256.594</b>
<b>%</b>	<b>3.35%</b>	<b>0.35%</b>	<b>4.35%</b>	<b>8.87%</b>	<b>2.02%</b>	<b>1.63%</b>	<b>8.73%</b>	<b>5.85%</b>	<b>0.04%</b>	<b>14.69%</b>	<b>34.57%</b>	<b>0.00%</b>	<b>12.23%</b>	<b>0.62%</b>	<b>0.09%</b>	<b>2.60%</b>	<b>100%</b>

Table 16: Use of animals in repeated dose toxicity testing methods

	up to 28 days	29 - 90 days	> 90 days	Total
Mice	5.735	509	142	6.386
Rats	10.119	2.199	1.264	13.582
Hamsters (Syrian)	142			142
Rabbits	228	16	32	276
Dogs	557	107	75	739
Pigs	83	6	52	141
Marmoset and tamarins		6	36	42
Cynomolgus monkey	392	289	780	1.461
Rhesus monkey		70		70
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>
<b>%</b>	<b>75.79%</b>	<b>13.76%</b>	<b>10.46%</b>	<b>100%</b>

Table 17: Use of animals in acute and subacute toxicity testing methods

	LD50. LC50	Other lethal methods	Non lethal methods	Total
Mice	192	117	2.491	2.800
Rats	1.233		2.227	3.460
Guinea-Pigs			2	2
Rabbits			84	84
Dogs			62	62
Carnivores	58			58
Pigs			26	26
Other birds			40	40
Other Fish	2.076			2.076
<b>Total</b>	<b>7.161</b>	<b>600</b>	<b>6.749</b>	<b>14.510</b>
<b>%</b>	<b>49.35%</b>	<b>4.14%</b>	<b>46.51%</b>	<b>100%</b>

Table 18: Use of animals in ecotoxicity testing methods

	Acute toxicity	Chronic toxicity	Reproductive ecotoxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Mice	280						280
Domestic fowl	15						15
Other birds	464		796				1.260
Rana	132						132
Other Amphibians		60					60
Zebra fish	3486	2883	847	8210	591	150	16.167
Other Fish	3644	3345		48	1287	67	8.391
<b>Total</b>	<b>6.792</b>	<b>7.398</b>	<b>3.886</b>	<b>10.702</b>	<b>1.723</b>	<b>217</b>	<b>31.394</b>
<b>%</b>	<b>21.93%</b>	<b>23.88%</b>	<b>12.54%</b>	<b>34.55%</b>	<b>5.56%</b>	<b>1.54%</b>	<b>100%</b>

## 5. Use of species and severity

Table 19: Use of species and severity in total

	Non-recovery	%	Mild [up to and including]	%	Moderate	%	Severe	%	Total
Mice	783.322	38,56%	787.535	38,77%	364.194	17,93%	96.287	4,74%	<b>2.031.338</b>
Rats	81.805	25,08%	146.656	44,95%	92.740	28,43%	5.032	1,54%	<b>326.233</b>
Guinea-Pigs	1.692	9,00%	11.900	63,27%	1.764	9,38%	3.453	18,36%	<b>18.809</b>
Hamsters (Syrian)	69	4,90%	1.246	88,43%	93	6,60%	1	0,07%	<b>1.409</b>
Hamsters (Chinese)			30	100,00%					<b>30</b>
Mongolian gerbil	1.035	19,68%	2.935	55,82%	1.241	23,60%	47	0,89%	<b>5.258</b>
Other Rodents	681	5,08%	12.551	93,68%	151	1,13%	15	0,11%	<b>13.398</b>
Rabbits	40.876	36,59%	68.801	61,58%	1.962	1,76%	79	0,07%	<b>111.718</b>
Cats	99	8,90%	830	74,64%	182	16,37%	1	0,09%	<b>1.112</b>
Dogs	76	1,69%	3.923	87,35%	471	10,49%	21	0,47%	<b>4.491</b>
Ferrets	12	5,06%	190	80,17%	35	14,77%			<b>237</b>
Other carnivores	5	0,73%	327	47,67%	354	51,60%			<b>686</b>
Horses, donkeys & cross-breeds	63	4,13%	1.424	93,38%	38	2,49%			<b>1.525</b>
Pigs	3.888	29,43%	7.826	59,23%	1.394	10,55%	105	0,79%	<b>13.213</b>
Goats	49	5,14%	893	93,70%	11	1,15%			<b>953</b>
Sheep	204	8,77%	1.105	47,49%	1.004	43,15%	14	0,60%	<b>2.327</b>
Cattle	173	4,17%	3.246	78,22%	670	16,14%	61	1,47%	<b>4.150</b>

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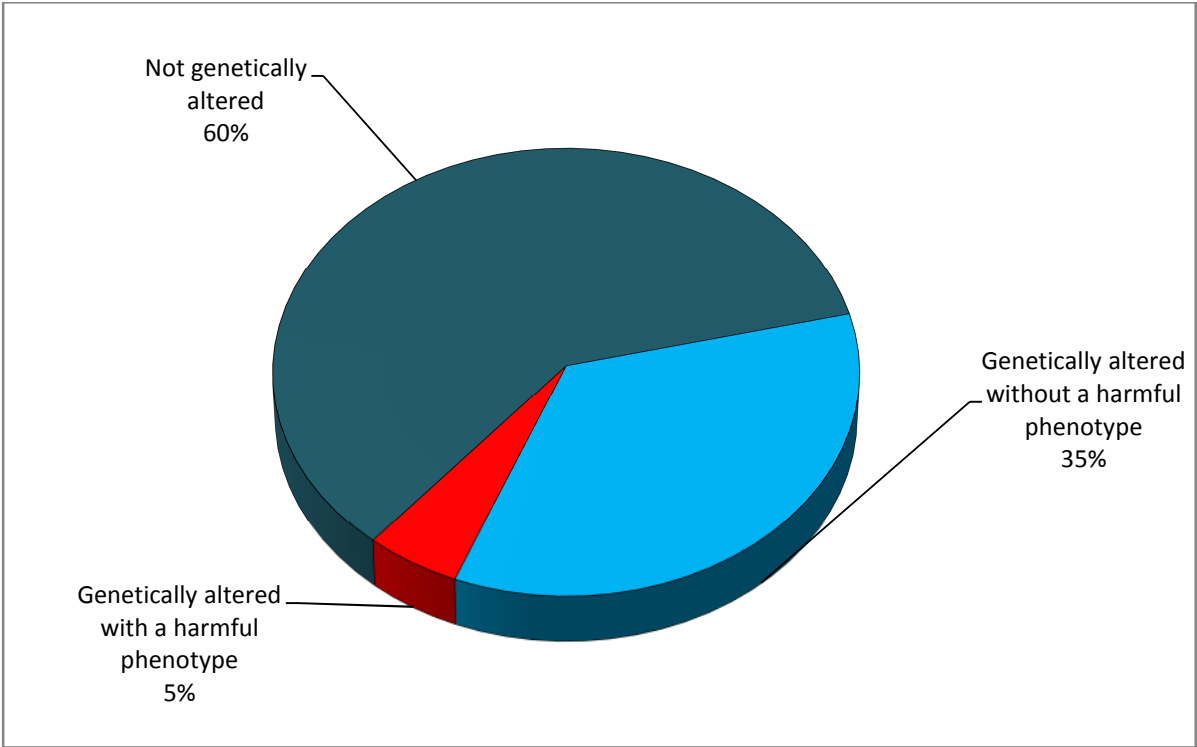
Prosimians			102	100,00%					<b>102</b>
Marmoset and tamarins	12	3,95%	216	71,05%	76	25,00%			<b>304</b>
Cynomolgus monkey	11	0,41%	1.825	68,02%	845	31,49%	2	0,07%	<b>2.683</b>
Rhesus monkey	6	13,33%	12	26,67%	27	60,00%			<b>45</b>
Baboons							6	100,00%	<b>6</b>
Other species of Old World Monkeys (Cercopithecoidea)			1	100,00%					<b>1</b>
Other Mammals	310	19,50%	1.065	66,98%	192	12,08%	23	1,45%	<b>1.590</b>
Domestic fowl	4.672	15,64%	22.586	75,60%	1.913	6,40%	703	2,35%	<b>29.874</b>
Other birds	972	6,80%	11.411	79,81%	1.910	13,36%	4	0,03%	<b>14.297</b>
Reptiles	257	33,95%	361	47,69%	139	18,36%			<b>757</b>
Rana	11	7,69%			132	92,31%			<b>143</b>
Xenopus	4.443	53,97%	3.624	44,02%	165	2,00%			<b>8.232</b>
Other Amphibians	1.300	39,33%	1.898	57,43%	107	3,24%			<b>3.305</b>
Zebra fish	40.234	33,28%	67.017	55,44%	11.923	9,86%	1.704	1,41%	<b>120.878</b>
Other Fish	20.917	25,89%	51.260	63,46%	3.779	4,68%	4.821	5,97%	<b>80.777</b>
Cephalopods	80	100,00%							<b>80</b>
<b>Total</b>	<b>987.274</b>	<b>35.26%</b>	<b>1.212.796</b>	<b>43.31%</b>	<b>487.512</b>	<b>17.41%</b>	<b>112.379</b>	<b>4.01%</b>	<b>2.799.961</b>

## 6. Use of species and genetic status

Table 20: Use of species and genetic status in total

	Not genetically altered	Genetically altered without a harmful phenotype	Genetically altered with a harmful phenotype	Total
Mice	1.005.413	890.249	135.676	<b>2.031.338</b>
Rats	313.427	8.997	3.809	<b>326.233</b>
Guinea-Pigs	18.809			<b>18.809</b>
Hamsters (Syrian)	1.373		36	<b>1.409</b>
Hamsters (Chinese)	30			<b>30</b>
Mongolian gerbil	5.258			<b>5.258</b>
Other Rodents	13.398			<b>13.398</b>
Rabbits	111.629		89	<b>111.718</b>
Cats	1.108		4	<b>1.112</b>
Dogs	4.491			<b>4.491</b>
Ferrets	237			<b>237</b>
Other carnivores	686			<b>686</b>
Horses, donkeys & cross-breeds	1.525			<b>1.525</b>
Pigs	12.935	177	101	<b>13.213</b>
Goats	953			<b>953</b>
Sheep	2.327			<b>2.327</b>
Cattle	4.149	1		<b>4.150</b>
Prosimians	102			<b>102</b>
Marmoset and tamarins	304			<b>304</b>
Cynomolgus monkey	2.683			<b>2.683</b>
Rhesus monkey	45			<b>45</b>
Baboons	6			<b>6</b>
Other species of Old World Monkeys (Cercopithecoidea)	1			<b>1</b>
Other Mammals	1.586	4		<b>1.590</b>
Domestic fowl	29.771	103		<b>29.874</b>
Other birds	14.297			<b>14.297</b>
Reptiles	757			<b>757</b>
Rana	143			<b>143</b>
Xenopus	8.228	4		<b>8.232</b>
Other Amphibians	3.184	121		<b>3.305</b>
Zebra fish	48.437	70.237	2.204	<b>120.878</b>
Other Fish	76.761	3.410	606	<b>80.777</b>
Cephalopods	80			<b>80</b>
<b>Total</b>	<b>1.684.133</b>	<b>973.303</b>	<b>142.525</b>	<b>2.799.961</b>

Figure 4: Use of animals: genetic status



## 7. Use of Species and re-use

Table 21: Use of species and re-use in total

	(Naive) First use	Re-uses	Total
Mice	2.005.097	26.241	<b>2.031.338</b>
Rats	320.629	5.604	<b>326.233</b>
Guinea-Pigs	18.523	286	<b>18.809</b>
Hamsters (Syrian)	1.403	6	<b>1.409</b>
Hamsters (Chinese)	30		<b>30</b>
Mongolian gerbil	4.883	375	<b>5.258</b>
Other Rodents	13.343	55	<b>13.398</b>
Rabbits	107.652	4.066	<b>111.718</b>
Cats	502	610	<b>1.112</b>
Dogs	2.437	2.054	<b>4.491</b>
Ferrets	207	30	<b>237</b>
Other carnivores	686		<b>686</b>
Horses. donkeys & cross-breeds	1.252	273	<b>1.525</b>
Pigs	12.279	934	<b>13.213</b>
Goats	942	11	<b>953</b>
Sheep	1.719	608	<b>2.327</b>
Cattle	3.762	388	<b>4.150</b>
Prosimians	78	24	<b>102</b>
Marmoset and tamarins	228	76	<b>304</b>
Cynomolgus monkey	2.075	608	<b>2.683</b>
Rhesus monkey	26	19	<b>45</b>
Baboons	6		<b>6</b>
Other species of Old World Monkeys		1	<b>1</b>
Other Mammals	1.523	67	<b>1.590</b>
Domestic fowl	29.703	171	<b>29.874</b>
Other birds	13.970	327	<b>14.297</b>
Reptiles	453	304	<b>757</b>
Rana	143		<b>143</b>
Xenopus	6.943	1.289	<b>8.232</b>
Other Amphibians	3.305		<b>3.305</b>
Zebra fish	118.423	2.455	<b>120.878</b>
Other Fish	80.749	28	<b>80.777</b>
Cephalopods	80		<b>80</b>
<b>Total uses</b>	<b>2.753.051</b>	<b>46.910</b>	<b>2.799.961</b>

Figure 5: Use of species groups and re-use

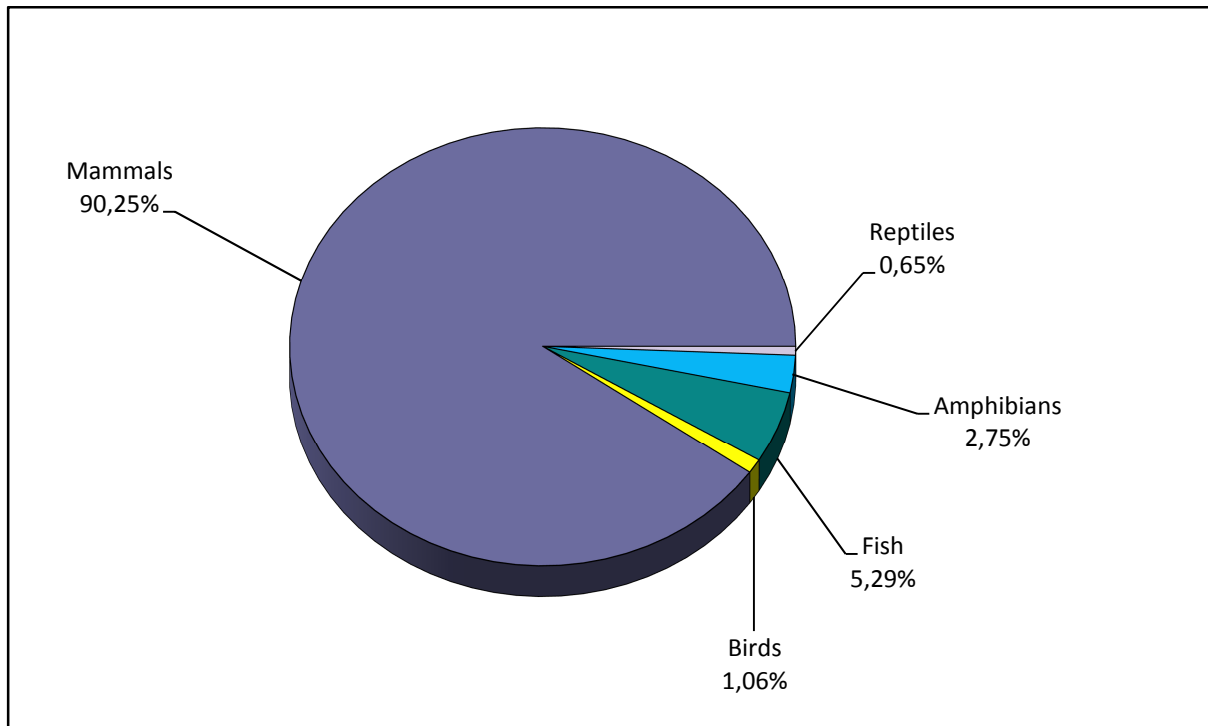
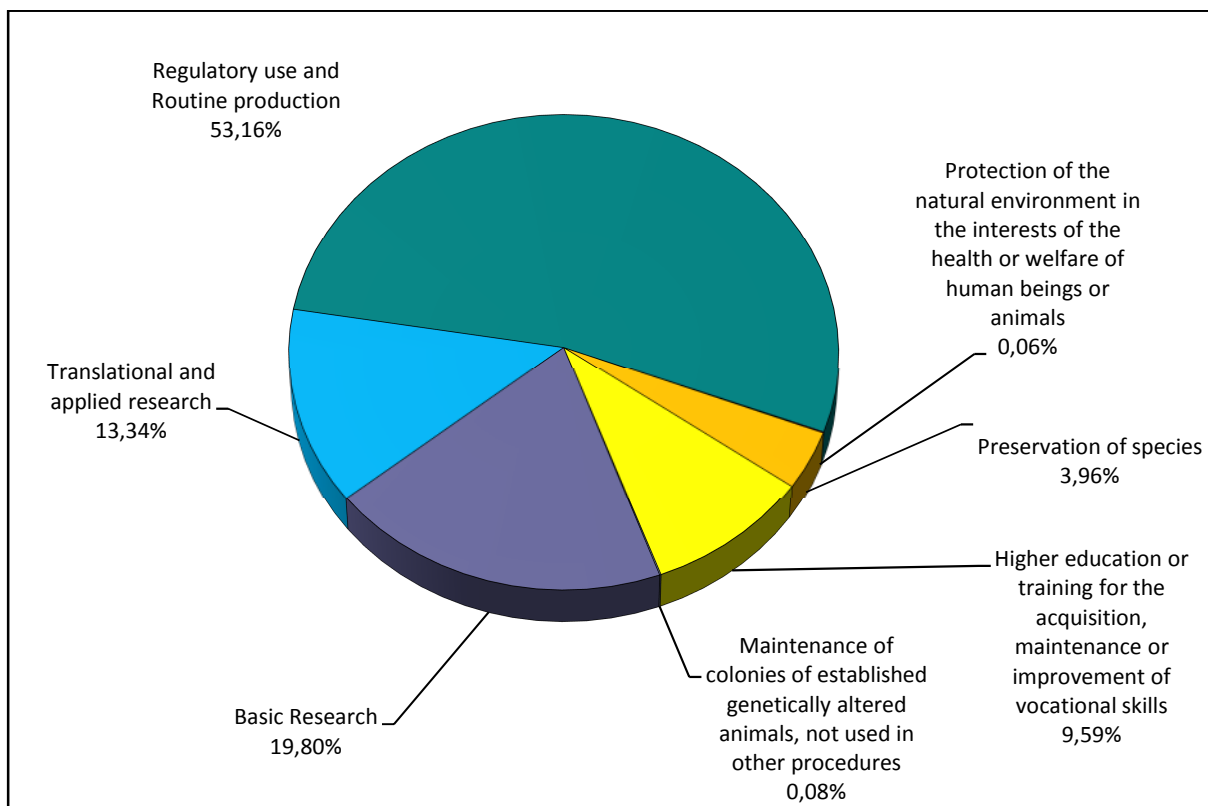


Figure 6: Primary purpose and re-use





## 8. Purposes and severity

Table 22: Purpose and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Basic Research	821.926	602.591	199.281	19.461	<b>1.643.259</b>
Translational and applied research	92.059	158.016	122.106	9.269	<b>381.450</b>
Regulatory use and Routine production	51.753	359.504	136.467	82.531	<b>630.255</b>
Protection of the natural environment in the interests of the health or welfare of human beings or animals	47	5.234	718	12	<b>6.011</b>
Preservation of species	4.918	24.372	508		<b>29.798</b>
Higher education or training for the acquisition, maintenance or improvement of vocational skills	19.835	24.477	11.484	97	<b>55.893</b>
Forensic enquiries	29	11			<b>40</b>
Maintenance of colonies of established genetically altered animals, not used in other procedures	11.193	23.787	17.266	1.009	<b>53.255</b>
<b>Total</b>	<b>1.001.760</b>	<b>1.197.992</b>	<b>487.830</b>	<b>112.379</b>	<b>2.799.961</b>
<b>%</b>	<b>35.78%</b>	<b>42.79%</b>	<b>17.42%</b>	<b>4.01%</b>	<b>100%</b>

Table 23: Basic research purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Oncology	36.230	39.085	33.133	1.776	<b>110.224</b>
Cardiovascular Blood and Lymphatic System	116.411	44.962	19.793	2.235	<b>183.401</b>
Nervous System	212.498	72.479	43.455	3.771	<b>332.203</b>
Respiratory System	28.251	7.549	6.993	260	<b>43.053</b>
Gastrointestinal System including Liver	28.718	12.016	7.846	421	<b>49.001</b>
Musculoskeletal System	15.281	10.220	3.632	275	<b>29.408</b>
Immune System	164.076	168.572	55.969	7.292	<b>395.909</b>
Urogenital/ Reproductive System	17.508	10.703	3.149	195	<b>31.555</b>
Sensory Organs (skin, eyes and ears)	29.733	16.240	3.403	2.503	<b>51.879</b>
Endocrine System/ Metabolism	37.250	30.217	9.244	82	<b>76.793</b>
Multisystemic	83.470	24.958	3.997	173	<b>112.598</b>
Ethology / Animal Behaviour / Animal Biology	2.201	28.365	3.312	28	<b>33.906</b>
Other basic research	50.299	137.225	5.355	450	<b>193.329</b>
<b>Total</b>	<b>821.926</b>	<b>602.591</b>	<b>199.281</b>	<b>19.461</b>	<b>1.643.259</b>
<b>%</b>	<b>50.02%</b>	<b>36.67%</b>	<b>12.13%</b>	<b>1.18%</b>	<b>100%</b>

Table 24: Basic research: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	702.084	477.036	177.250	16.956
Rats	56.041	15.680	14.521	2.246
Guinea-Pigs	467	421	28	
Hamsters (Syrian)	13	6		
Mongolian gerbil	717	393	433	1
Other Rodents	364	2.466	143	
Rabbits	753	726	293	2
Cats	17	60	34	
Dogs		433		
Ferrets	12	32	11	
Other carnivores	5	157	25	
Horses, donkeys & cross-breeds	2	1.230	23	
Pigs	1.049	1.877	281	4
Goats		70		
Sheep	59	144	134	2
Cattle	12	1.195	134	
Prosimians		102		
Marmoset and tamarins	12	86	37	
Cynomolgus monkey	3	10	52	
Rhesus monkey	6		21	
Other Mammals	90	654	177	11
Domestic fowl	2.361	5.671	225	229
Other birds	853	5.804	1.787	
Reptiles	257	10	139	
Xenopus	3.945	3.498	153	
Other Amphibians	1.284	929	45	
Zebra fish	37.193	59.044	3.190	10
Other Fish	14.295	24.857	145	
Cephalopods	32			
<b>Total</b>	<b>821.926</b>	<b>602.591</b>	<b>199.281</b>	<b>19.461</b>

Table 25: Translational and applied research: purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Human Cancer	15.415	47.960	64.019	1.936	<b>129.330</b>
Human Infectious Disorders	7.367	11.518	5.907	1.165	<b>25.957</b>
Human Cardiovascular Disorders	15.853	6.891	3.999	969	<b>27.712</b>
Human Nervous and Mental Disorders	16.135	28.353	14.158	618	<b>59.264</b>
Human Respiratory Disorders	3.174	7.994	5.025	1.242	<b>17.435</b>
Human Gastrointestinal Disorders including Liver	2.340	5.436	2.388	92	<b>10.256</b>
Human Musculoskeletal Disorders	1.706	483	2.540	181	<b>4.910</b>
Human Immune Disorders	10.029	5.043	6.645	72	<b>21.789</b>
Human Urogenital/Reproductive Disorders	3.325	1.065	3.809	115	<b>8.314</b>
Human Sensory Organ Disorders (skin, eyes and ears)	1.632	1.986	712	1	<b>4.331</b>
Human Endocrine/Metabolism Disorders	6.960	15.713	3.516	11	<b>26.200</b>
Other Human Disorders	1.038	732	1.151	9	<b>2.930</b>
Animal Diseases and Disorders	909	14.705	3.167	1.892	<b>20.673</b>
Animal Welfare	1.707	3.560	928	74	<b>6.269</b>
Diagnosis of diseases	1.982	1.097	994	717	<b>4.790</b>
Plant diseases	15		21		<b>36</b>
Non-regulatory toxicology and ecotoxicology	2.472	5.480	3.127	175	<b>11.254</b>
<b>Total</b>	<b>92.059</b>	<b>158.016</b>	<b>122.106</b>	<b>9.269</b>	<b>381.450</b>
<b>%</b>	<b>24.13%</b>	<b>41.43%</b>	<b>32.01%</b>	<b>2.43%</b>	<b>100.00%</b>

**Table 26: Translational and applied research: species and severity**

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	70.327	111.083	104.577	7.817
Rats	16.365	23.403	11.822	517
Guinea-Pigs	952	1.611	645	309
Hamsters (Syrian)	38	586	36	
Mongolian gerbil	11	956	703	43
Other Rodents	91	1.729	1	15
Rabbits	335	193	611	43
Cats		214	81	1
Dogs		903	116	3
Ferrets		158	24	
Other carnivores		2		
Horses, donkeys & cross-breeds	35	108	15	
Pigs	816	2.989	330	98
Goats		750	7	
Sheep	39	583	779	12
Cattle	153	980	331	61
Marmoset and tamarins			3	
Cynomolgus monkey		169		
Rhesus monkey		7	6	
Other Old World Monkeys		1		
Other Mammals	80	76		
Domestic fowl	1.872	4.693	1.293	265
Other birds	35	3.984	4	
Rana	1			
Xenopus	9	69	12	
Other Amphibians		18		
Zebra fish	392	871	8	14
Other Fish	508	1880	702	65
<b>Total</b>	<b>92.059</b>	<b>158.016</b>	<b>122.106</b>	<b>9.269</b>

**Table 27: Regulatory use/routine production purposes and severity**

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Routine production	39.306	50.638	2.955	12	<b>92.911</b>
Quality control (incl batch safety and potency testing)	897	119.117	45.518	69.861	<b>235.393</b>
Other efficacy and tolerance testing	1.369	19.410	24.099	479	<b>45.357</b>
Toxicity and other safety testing including pharmacology	10.181	170.339	63.895	12.179	<b>256.594</b>
<b>Total</b>	<b>51.753</b>	<b>359.504</b>	<b>136.467</b>	<b>82.531</b>	<b>630.255</b>
<b>%</b>	<b>8.21%</b>	<b>57.04%</b>	<b>21.65%</b>	<b>13.09%</b>	<b>100%</b>

**Table 28: Regulatory use/routine production: species and severity**

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	3.432	140.340	57.213	70.860
Rats	4.607	102.155	63.294	1.805
Guinea-Pigs	224	9.510	1.057	3.144
Hamsters (Syrian)	1	587	57	1
Hamsters (Chinese)		30		
Mongolian gerbil	72	1.563	75	3
Other Rodents	56	8.195	7	
Rabbits	39.674	67.714	1.049	34
Cats	82	514	67	
Dogs	70	2.437	355	18
Other carnivores		168	329	
Horses. donkeys & cross-breeds		23		
Pigs	740	2.421	721	3
Goats		51	4	
Sheep		219	57	
Cattle		837	205	
Marmoset and tamarins		124	36	
Cynomolgus monkey	8	1.644	793	2
Other Mammals		128	15	12
Domestic fowl	40	11.268	395	209
Other birds		1.340	115	4
Reptiles		300		
Rana			132	
Other Amphibians			60	
Zebra fish	2.501	4.061	8.725	1.680
Other Fish	246	3.875	1.706	4.756
<b>Total</b>	<b>51.753</b>	<b>359.504</b>	<b>136.467</b>	<b>82.531</b>

Table 29: Quality control purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Batch safety testing	580	40.244	2.667	298	43.789
Pyrogenicity testing		6847	145		6.992
Batch potency testing	230	71.944	42.706	69.554	184.434
Other quality controls	87	82		9	178
<b>Total</b>	<b>897</b>	<b>119.117</b>	<b>45.518</b>	<b>69.861</b>	<b>235.393</b>
<b>%</b>	<b>0.38%</b>	<b>50.60%</b>	<b>19.34%</b>	<b>29.68%</b>	<b>100%</b>

Table 30: Routine production purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Blood based products	38.388	47.788	28		86.204
Monoclonal antibodies	583	866	51		1.500
Other product types	335	1984	2.876	12	5.207
<b>Total</b>	<b>39.306</b>	<b>50.638</b>	<b>2.955</b>	<b>12</b>	<b>92.911</b>
<b>%</b>	<b>42.31%</b>	<b>54.50%</b>	<b>3.18%</b>	<b>0.01%</b>	<b>100%</b>

Table 31: Toxicity and other safer testing by test type purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Acute and sub-acute	3	4.814	1.417	2.374	8.608
Skin irritation/corrosion		855	39		894
Skin sensitisation		10.353	817		11.170
Eye irritation/corrosion		117	108		225
Repeated dose toxicity	4	14.459	7.759	547	22.769
Carcinogenicity	132	4.068	938	47	5.185
Genotoxicity	78	3.955	112	29	4.174
Reproductive toxicity		20.378	1.777	233	22.388
Developmental toxicity		14.033	168	818	15.019
Neurotoxicity		90			90
Kinetics	323	28.888	7.719	762	37.692
Pharmaco-dynamics (incl safety pharmacology)	6.445	46.127	32.321	3.805	88.698
Phototoxicity			12		12
Ecotoxicity	2.739	14.416	10.675	3.564	31.394
Target animal safety	60	1.516	25		1.601
Other toxicity/safety testing	397	6.270	8		6.675
<b>Total</b>	<b>10.181</b>	<b>170.339</b>	<b>63.895</b>	<b>12.179</b>	<b>256.594</b>
<b>%</b>	<b>3.97%</b>	<b>66.38%</b>	<b>24.90%</b>	<b>4.75%</b>	<b>100%</b>

Table 32: Repeated dose toxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
up to 28 days	4	10.540	6.196	516	17.256
29 - 90 days		2.755	360	17	3.132
> 90 days		1.164	1.203	14	2.381
<b>Total</b>	<b>4</b>	<b>14.459</b>	<b>7.759</b>	<b>547</b>	<b>22.769</b>
<b>%</b>	<b>0.02%</b>	<b>63.50%</b>	<b>34.08%</b>	<b>2.40%</b>	<b>100%</b>

Table 33: Acute and subacute toxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
LD50. LC50	3	316	1.021	2.219	3.559
Other lethal methods		91	14	12	117
Non lethal methods		4.407	382	143	4.932
<b>Total</b>	<b>3</b>	<b>4.814</b>	<b>1417</b>	<b>2.374</b>	<b>8.608</b>
<b>%</b>	<b>0.03%</b>	<b>55.92%</b>	<b>16.46%</b>	<b>27.58%</b>	<b>100%</b>

Table 34: Ecotoxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Acute toxicity	1.414	3.638	586	2.383	8.021
Chronic toxicity	1.050	2.375	1.704	1.159	6.288
Reproductive ecotoxicity		1.627		16	1.643
Endocrine activity		720	7.538		8.258
Bioaccumulation	71	961	840	6	1.878
Other ecotoxicity	204	5.095	7		5.306
<b>Total</b>	<b>2.739</b>	<b>14.416</b>	<b>10.675</b>	<b>3.564</b>	<b>31.394</b>
<b>%</b>	<b>8.72%</b>	<b>45.92%</b>	<b>34.00%</b>	<b>11.35%</b>	<b>100%</b>

## 9. Purposes and testing by type of legislation

Table 35: Regulatory use and routine production purposes: type of legislation

	Quality control (incl batch safety and potency test- ing)	Other efficacy and tolerance testing	Toxicity and other safety testing includ- ing pharma- cology	Routine pro- duction	Total	%
Legislation on medicinal prod- ucts for human use	211.765	39.520	151.140	38.776	<b>441.201</b>	<b>70.00%</b>
Legislation on medicinal prod- ucts for veterinary use and their resi- dues	22.741	3.572	11.604	256	<b>38.173</b>	<b>6.06%</b>
Medical devices legislation	847	2	9.775	50.763	<b>61.387</b>	<b>9.74%</b>
Industrial chemi- cals legislation			50.563	6	<b>50.569</b>	<b>8.02%</b>
Plant protection product legislation			31.544	625	<b>32.169</b>	<b>5.10%</b>
Biocides legislati- on		733	341	126	<b>1.200</b>	<b>0.19%</b>
Food legislation including food contact material	40		38	1	<b>79</b>	<b>0.01%</b>
Feed legislation including legisla- tion for the safety of target animals. workers and envi- ronment		1.386	252		<b>1.638</b>	<b>0.26%</b>
Other legislation		144	1.337	2.358	<b>3.839</b>	<b>0.61%</b>
<b>Total</b>	<b>235.393</b>	<b>45.357</b>	<b>256.594</b>	<b>92.911</b>	<b>630.255</b>	<b>100.00%</b>



Table 36: Quality control purposes: type of legislation

	Batch potency testing	Batch safety testing	Other quality controls	Pyrogenicity testing	Total
Legislation on medicinal products for human use	179.560	25.765	9	6.431	<b>211.765</b>
Legislation on medicinal products for veterinary use and their residues	4.588	18.024	89	40	<b>22.741</b>
Medical devices legislation	286		40	521	<b>847</b>
Food legislation including food contact material			40		<b>40</b>
Other legislation		476	12		<b>488</b>
<b>Total</b>	<b>184.434</b>	<b>43.789</b>	<b>178</b>	<b>6.992</b>	<b>235.393</b>

Table 37: Routine production purposes: type of legislation

	Blood based products	Monoclonal antibodies	Other product types	Total
Legislation on medicinal products for human use	38.412	44	320	<b>38.776</b>
Legislation on medicinal products for veterinary use and their residues			256	<b>256</b>
Medical devices legislation	47.789	50	2.924	<b>50.763</b>
Industrial chemicals legislation			6	<b>6</b>
Plant protection product legislation		372	253	<b>625</b>
Biocides legislation			126	<b>126</b>
Food legislation including food contact material			1	<b>1</b>
Other legislation	3	1.034	1.321	<b>2.358</b>
<b>Total</b>	<b>86.204</b>	<b>1.500</b>	<b>5.207</b>	<b>92.911</b>

**Table 38: Toxicity and other safety testing by test type purposes: type of legislation**

	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
Acute and sub-acute	1.019	355	2.649	2.175	2.224		38		148	8.608
Skin irritation/corrosion	22		722	127	23					894
Skin sensitisation	1.190	35	4.855	4.394	681				15	11.170
Eye irritation/corrosion	4		36	169	16					225
Repeated dose toxicity	15.013	2.209	298	4.354	895					22.769
Carcinogenicity	356		506	1.213	3.110					5.185
Genotoxicity	667		269	1.978	1.260					4.174
Reproductive toxicity	1.618	839		17.502	2.429					22.388
Developmental toxicity	113			14.422	484					15.019
Neurotoxicity	0			10	80					90
Kinetics	35.509	1.509	3	100	571					37.692
Pharmaco-dynamics (incl safety pharmacology)	86.601	2.043	13		29				12	88.698
Phototoxicity	12									12
Ecotoxicity	6.835	2.879	294	3.598	16.573	51		252	912	31.394
Target animal safety	340	947			314					1.601
Other toxicity/safety testing	1.841	788	130	521	2.855	290			250	6.675
<b>Total</b>	<b>151.140</b>	<b>11.604</b>	<b>9.775</b>	<b>50.563</b>	<b>31.544</b>	<b>341</b>	<b>38</b>	<b>252</b>	<b>1.337</b>	<b>256.594</b>

**Table 39: Repeated dose toxicity purposes: type of legislation**

	up to 28 days	29 - 90 days	> 90 days	Total
Legislation on medicinal products for human use	11.674	1.144	2.195	<b>15.013</b>
Legislation on medicinal products for veterinary use and their residues	1679	408	122	<b>2.209</b>
Medical devices legislation	104	194		<b>298</b>
Industrial chemicals legislation	3.084	1.246	24	<b>4.354</b>
Plant protection product legislation	715	140	40	<b>895</b>
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>

**Table 40: Acute and subacute toxicity testing methods: type of legislation**

	LD50, LC50	Other lethal methods	Non lethal methods	Total
Legislation on medicinal products for human use	11	79	929	<b>1.019</b>
Legislation on medicinal products for veterinary use and their residues	355			<b>355</b>
Medical devices legislation			2.649	<b>2.649</b>
Industrial chemicals legislation	1.183		992	<b>2.175</b>
Plant protection product legislation	2.010		214	<b>2.224</b>
Food legislation including food contact material		38		<b>38</b>
Other legislation			148	<b>148</b>
<b>Total</b>	<b>3.559</b>	<b>117</b>	<b>4.932</b>	<b>8.608</b>

**Table 41: Ecotoxicity purposes: type of legislation**

	Acute toxicity	Chronic toxicity	Reproductive ecotoxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Legislation on medicinal products for human use	20	1.173		5.530	112		<b>6.835</b>
Legislation on medicinal products for veterinary use and their residues	30			2.320	529		<b>2.879</b>
Medical devices legislation	294						<b>294</b>
Industrial chemicals legislation	2.648	600	200			150	<b>3.598</b>
Plant protection product legislation	3.898	4.515	1.443	408	1.166	5.143	<b>16.573</b>
Biocides legislation					51		<b>51</b>
Feed legislation including legislation for the safety of target animals, workers and environment	252						<b>252</b>
Other legislation	879				20	13	<b>912</b>
<b>Total</b>	<b>8.021</b>	<b>6.288</b>	<b>1.643</b>	<b>8.258</b>	<b>1.878</b>	<b>5.306</b>	<b>31.394</b>

## 10. Purposes and origin of legislative requirement

**Table 42: Regulatory use and routine production: origin of legislative requirement**

	Quality control (incl batch safety and potency testing)	Other efficacy and tolerance testing	Toxicity and other safety testing including pharmacology	Routine production	Total
Legislation satisfying EU requirements	220.189	28.782	254.358	91.465	594.794
Legislation satisfying national requirements only [within EU]		16.575	1.403	1.446	19.424
Legislation satisfying Non-EU requirements only	15.204		833		16.037
<b>Total</b>	<b>235.393</b>	<b>45.357</b>	<b>256.594</b>	<b>92.911</b>	<b>630.255</b>

**Table 43: Toxicity and other safety testing: origin of legislative requirement**

	Legislation satisfying EU requirements	Legislation satisfying national requirements only [within EU]	Legislation satisfying Non-EU requirements only	Total
Acute and sub-acute	8.386	186	36	8.608
Skin irritation/corrosion	872	19	3	894
Skin sensitisation	11.032	15	123	11.170
Eye irritation/corrosion	222		3	225
Repeated dose toxicity	22.697		72	22.769
Carcinogenicity	5.185			5.185
Genotoxicity	4.174			4.174
Reproductive toxicity	22.386		2	22.388
Developmental toxicity	15.019			15.019
Neurotoxicity	90			90
Kinetics	37.650	30	12	37.692
Pharmaco-dynamics (incl safety pharmacology)	88.277		421	88.698
Phototoxicity	12			12
Ecotoxicity	30.226	1.153	15	31.394
Target animal safety	1.541		60	1.601
Other toxicity/safety testing	6.589		86	6.675
<b>Total</b>	<b>254.358</b>	<b>1.403</b>	<b>833</b>	<b>256.594</b>

Table 44: Repeated dose toxicity: origin of legislative requirement

	up to 28 days	29 - 90 days	> 90 days	Total
Legislation satisfying EU requirements	17.184	3.132	2.381	<b>22.697</b>
Legislation satisfying national requirements only [within EU]				
Legislation satisfying Non-EU requirements only	72			<b>72</b>
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>

Table 45: Acute and subacute toxicity testing: origin of legislative requirement

	LD50, LC50	Other lethal methods	Non lethal methods	Total
Legislation satisfying EU requirements	3.543	79	4.764	<b>8.386</b>
Legislation satisfying national requirements only [within EU]		38	148	<b>186</b>
Legislation satisfying Non-EU requirements only	16		20	<b>36</b>
<b>Total</b>	<b>3.559</b>	<b>117</b>	<b>4.932</b>	<b>8.608</b>

Table 46: Ecotoxicity testing: origin of legislative requirement

	Acute toxicity	Chronic toxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Legislation satisfying EU requirements	6.886	6.288	8.258	1.858	5.293	<b>28.583</b>
Legislation satisfying national requirements only [within EU]	1120			20	13	<b>1.153</b>
Legislation satisfying Non-EU requirements only	15					<b>15</b>
<b>Total</b>	<b>8.021</b>	<b>6.288</b>	<b>8.258</b>	<b>1.878</b>	<b>5.306</b>	<b>29.751</b>

Table 47: Animals used under § 7 (2) and § 4 (3) of the Animal Protection Act by species

	Animals used under § 7 (2) Animal Protection Act	Animals used under § 4 (3) Animal Protection Act	Total
Mice	1.400.560	630.778	<b>2.031.338</b>
Rats	263.308	62.925	<b>326.233</b>
Guinea-Pigs	18.237	572	<b>18.809</b>
Hamsters (Syrian)	1.390	19	<b>1.409</b>
Hamsters (Chinese)	30		<b>30</b>
Mongolian gerbil	4.568	690	<b>5.258</b>
Other Rodents	12.793	605	<b>13.398</b>
Rabbits	110.969	749	<b>111.718</b>
Cats	1.112		<b>1.112</b>
Dogs	4.491		<b>4.491</b>
Ferrets	230	7	<b>237</b>
Other carnivores	686		<b>686</b>
Horses, donkeys & cross-breeds	1.507	18	<b>1.525</b>
Pigs	12.299	914	<b>13.213</b>
Goats	904	49	<b>953</b>
Sheep	2.290	37	<b>2.327</b>
Cattle	4.029	121	<b>4.150</b>
Prosimians	102		<b>102</b>
Marmoset and tamarins	292	12	<b>304</b>
Cynomolgus monkey	2.678	5	<b>2.683</b>
Rhesus monkey	39	6	<b>45</b>
Baboons	6		<b>6</b>
Other species of Old World Monkeys (Cercopithecoidea)	1		<b>1</b>
Other Mammals	1.383	207	<b>1.590</b>
Domestic fowl	25.658	4.216	<b>29.874</b>
Other birds	13.663	634	<b>14.297</b>
Reptiles	501	256	<b>757</b>
Rana	132	11	<b>143</b>
Xenopus	4.038	4.194	<b>8.232</b>
Other Amphibians	2.190	1.115	<b>3305</b>
Zebra fish	88.147	32.731	<b>120.878</b>
Other Fish	66.731	14.046	<b>80.777</b>
Cephalopods		80	<b>80</b>
<b>Total</b>	<b>2.044.964</b>	<b>754.997</b>	<b>2.799.961</b>

**Table 48: Animals used under § 7 (2) and § 4 (3) of the Animal Protection Act by purpose**

	Animals used under § 7 (2)	%	Animals used under § 4 (3)	%	Total	
Basic Research	975.687	47.71%	667.572	88.42%	<b>1.643.259</b>	<b>58.69%</b>
Translational and applied research	312.084	15.26%	69.366	9.19%	<b>381.450</b>	<b>13.62%</b>
Regulatory use and Routine production	628.941	30.76%	1.314	0.17%	<b>630.255</b>	<b>22.51%</b>
Protection of the natural environment in the interests of the health or welfare of human beings or animals	5.991	0,29%	20	0,01%	<b>6.011</b>	<b>0.22%</b>
Preservation of species	29.297	1.43%	501	0.07%	<b>29.798</b>	<b>1.06%</b>
Higher education or training for the acquisition, maintenance or improvement of vocational skills	49.389	2.42%	6.504	0.85%	<b>55.893</b>	<b>2.00%</b>
Forensic enquiries	15	0,01	25	0.01%	<b>40</b>	<b>0,02%</b>
Maintenance of colonies of established genetically altered animals, not used in other procedures	43.560	2.12	9.695	1.28%	<b>53.255</b>	<b>1.88%</b>
<b>Total</b>	<b>2.044.964</b>	<b>100%</b>	<b>754.997</b>	<b>100%</b>	<b>2.799.961</b>	<b>100%</b>

**Table 49: Animals used under § 7 (2) and § 4 (3) of the Animal Protection Act by genetic status**

	Animals used under § 7 (2) Animal Protection Act	Animals used under § 4 (3) Animal Protection Act	Total	
Not genetically altered	1.309.921	374.218	<b>1.684.139</b>	<b>61%</b>
Genetically altered without a harmful phenotype	620.395	380.779	<b>1.001.174</b>	<b>35%</b>
Genetically altered with a harmful phenotype	114.648		<b>114.648</b>	<b>4%</b>
<b>Total</b>	<b>2.044.964</b>	<b>754.997</b>	<b>2.799.961</b>	<b>100%</b>



Table 50: Animals used under § 7 (2) and § 4 (3) of the Animal Protection Act by severity

	Animals used under § 7 (2) Animal Protection Act	Animals used under § 4 (3) Animal Protection Act	Total	
Non-recovery	232.277	754.997	<b>987.274</b>	<b>35%</b>
Mild [up to and including]	1.212.796		<b>1.212.796</b>	<b>43%</b>
Moderate	487.512		<b>487.512</b>	<b>18%</b>
Severe	112.379		<b>112.379</b>	<b>4%</b>
<b>Total</b>	<b>2.044.964</b>	<b>754.997</b>	<b>2.799.961</b>	<b>100%</b>