

SECTION 2: ALL USES OF ANIMALS FOR RESEARCH, TESTING, ROUTINE PRODUCTION AND EDUCATION AND TRAINING PURPOSES - TRENDS

Excludes the uses of animals for the creation and maintenance of genetically altered animals.

FILTERS

- Reporting year:All
- Country:All
- EC ID:All
- File name:All
- EU Submission:Yes
- ID 1:All
- ID 2:All
- ID 3:All
- Species:All
- Other species:All
- Species grouping level 1:All
- Species grouping level 2:All
- Mammals:All
- Non-human primates:All
- Reuse:All
- Place of birth:All
- NHP Place of birth:All
- NHP Colony type: Self-sustaining colony:All
- NHP generation:All
- Genetic status:All
- Purpose:All
- Purpose category level 1:All
- Purpose category level 2:All
- Purpose category level 3:All
- Purpose category level 4:All
- Type of legislation:All
- Other legislation:All
- Origin of legislation:All
- Severity:All
- Custom severity:All
- Method of tissue sampling:All
- Severity of genotyping:All

ALL USES OF ANIMALS

Uses of animals by species

Species	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mice	150358	167976	160422	174511	159977	145890	138005	142779	138861	117832
Rats	48554	47573	38498	37280	37726	33349	25552	24696	23574	19427
Guinea-Pigs	2643	3362	2947	2659	3913	2249	1991	1434	1639	1773
Hamsters (Syrian)	172	152	282	292	6	111	239	163	106	120
Hamsters (Chinese)	0	0	0	0	0	0	0	0	0	2
Other rodents	86	4	3	13	33	0	12	0	0	0
Rabbits	1665	2370	2443	3116	2304	2344	4370	3029	1870	2166
Cats	59	18	0	3	1	6	3	0	0	0
Dogs	157	266	214	370	379	589	637	237	473	552
Ferrets	0	2	4	0	0	0	0	0	0	0
Other carnivores	886	627	1035	3347	3843	6128	0	1	0	8
Horses, donkeys and cross-breeds	115	328	119	181	51	16	52	41	33	45
Pigs	10572	8066	5801	7643	8643	8816	17222	23698	12997	12836
Goats	11	6	1	13	51	27	8	21	2	11
Sheep	47	37	66	78	18	67	41	48	74	282
Cattle	534	2077	3677	1999	1185	743	1898	1476	4608	509
Prosimians	0	0	0	0	0	0	0	6	0	0
Baboons	0	0	0	0	0	0	0	5	0	0
Other mammals	38	55	28	29	42	36	28	115	21	23
Domestic fowl	2407	1732	466	2283	1269	621	1534	355	2659	976
Other birds	438	373	408	559	439	401	467	411	420	49
Reptiles	265	220	289	155	53	24	154	86	124	114
Rana	0	0	4	809	452	792	0	0	0	0
Xenopus	64	56	285	1389	391	390	740	480	490	496
Other amphibians	26	30	47	94	72	16	139	149	109	91
Zebra fish	2530	3308	1587	2028	3935	7731	8401	7678	6427	6390
Sea bass	0	0	0	0	0	0	2762	660	5	4867
Salmon, trout, chars and graylings	0	0	0	0	0	0	8763	13483	12817	9322
Guppy, swordtail, molly, platy	0	0	0	0	0	0	0	0	0	66
Other fish	17318	48591	15606	11888	24742	39781	2439	1567	533	1271
Total	238945	287229	234232	250739	249525	250127	215457	222618	207842	179228

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Uses of animals by genetic status

Genetic status	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Not genetically altered	200508	245341	195240	212489	216774	212222	177466	181252	162201	135951
Genetically altered without a harmful phenotype	25432	28348	27228	28009	27295	31959	31849	34329	38307	33619
Genetically altered with a harmful phenotype	13005	13540	11764	10241	5456	5946	6142	7037	7334	9658
Total	238945	287229	234232	250739	249525	250127	215457	222618	207842	179228

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Proportions of uses of animals by genetic status

Genetic status	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Not genetically altered	83.91%	85.42%	83.35%	84.75%	86.87%	84.85%	82.37%	81.42%	78.04%	75.85%
Genetically altered without a harmful phenotype	10.64%	9.87%	11.62%	11.17%	10.94%	12.78%	14.78%	15.42%	18.43%	18.76%
Genetically altered with a harmful phenotype	5.44%	4.71%	5.02%	4.08%	2.19%	2.38%	2.85%	3.16%	3.53%	5.39%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

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Reuse of animals

Reuse	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
No	236222	282448	231795	245638	244492	247827	212553	219088	204099	177202
Yes	2723	4781	2437	5101	5033	2300	2904	3530	3743	2026
Total	238945	287229	234232	250739	249525	250127	215457	222618	207842	179228

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ALL USES OF ANIMALS BY SPECIES CATEGORY

Species category level 1

Species category	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Warm-blooded vertebrates	218742	235024	216414	234376	219880	201393	192059	198515	187337	156611
Cold-blooded vertebrates	20203	52205	17818	16363	29645	48734	23398	24103	20505	22617
Total	238945	287229	234232	250739	249525	250127	215457	222618	207842	179228

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Species category level 2

Species category	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Amphibians	90	86	336	2292	915	1198	879	629	599	587
Birds	2845	2105	874	2842	1708	1022	2001	766	3079	1025
Fish	19848	51899	17193	13916	28677	47512	22365	23388	19782	21916
Mammals	215897	232919	215540	231534	218172	200371	190058	197749	184258	155586
Reptiles	265	220	289	155	53	24	154	86	124	114
Total	238945	287229	234232	250739	249525	250127	215457	222618	207842	179228

Excel

Proportions of species category level 2

Species category	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Amphibians	0.04%	0.03%	0.14%	0.91%	0.37%	0.48%	0.41%	0.28%	0.29%	0.33%
Birds	1.19%	0.73%	0.37%	1.13%	0.68%	0.41%	0.93%	0.34%	1.48%	0.57%
Fish	8.31%	18.07%	7.34%	5.55%	11.49%	19%	10.38%	10.51%	9.52%	12.23%
Mammals	90.35%	81.09%	92.02%	92.34%	87.43%	80.11%	88.21%	88.83%	88.65%	86.81%
Reptiles	0.11%	0.08%	0.12%	0.06%	0.02%	0.01%	0.07%	0.04%	0.06%	0.06%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Excel

Uses of mammals

Species	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mice	150358	167976	160422	174511	159977	145890	138005	142779	138861	117832
Rats	48554	47573	38498	37280	37726	33349	25552	24696	23574	19427
Guinea-Pigs	2643	3362	2947	2659	3913	2249	1991	1434	1639	1773
Hamsters (Syrian)	172	152	282	292	6	111	239	163	106	120
Hamsters (Chinese)	0	0	0	0	0	0	0	0	0	2
Other rodents	86	4	3	13	33	0	12	0	0	0
Rabbits	1665	2370	2443	3116	2304	2344	4370	3029	1870	2166
Cats	59	18	0	3	1	6	3	0	0	0
Dogs	157	266	214	370	379	589	637	237	473	552
Ferrets	0	2	4	0	0	0	0	0	0	0
Other carnivores	886	627	1035	3347	3843	6128	0	1	0	8
Horses, donkeys and cross-breeds	115	328	119	181	51	16	52	41	33	45
Pigs	10572	8066	5801	7643	8643	8816	17222	23698	12997	12836
Goats	11	6	1	13	51	27	8	21	2	11
Sheep	47	37	66	78	18	67	41	48	74	282
Cattle	534	2077	3677	1999	1185	743	1898	1476	4608	509
Prosimians	0	0	0	0	0	0	0	6	0	0
Baboons	0	0	0	0	0	0	0	5	0	0
Other mammals	38	55	28	29	42	36	28	115	21	23
Total	215897	232919	215540	231534	218172	200371	190058	197749	184258	155586

Excel

Proportions of uses of mammals

Species	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mice	69.64%	72.12%	74.43%	75.37%	73.33%	72.81%	72.61%	72.2%	75.36%	75.73%
Rats	22.49%	20.42%	17.86%	16.1%	17.29%	16.64%	13.44%	12.49%	12.79%	12.49%
Guinea-Pigs	1.22%	1.44%	1.37%	1.15%	1.79%	1.12%	1.05%	0.73%	0.89%	1.14%
Hamsters (Syrian)	0.08%	0.07%	0.13%	0.13%	0%	0.06%	0.13%	0.08%	0.06%	0.08%
Hamsters (Chinese)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other rodents	0.04%	0%	0%	0.01%	0.02%	0%	0.01%	0%	0%	0%
Rabbits	0.77%	1.02%	1.13%	1.35%	1.06%	1.17%	2.3%	1.53%	1.01%	1.39%
Cats	0.03%	0.01%	0%	0%	0%	0%	0%	0%	0%	0%
Dogs	0.07%	0.11%	0.1%	0.16%	0.17%	0.29%	0.34%	0.12%	0.26%	0.35%
Ferrets	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other carnivores	0.41%	0.27%	0.48%	1.45%	1.76%	3.06%	0%	0%	0%	0.01%
Horses, donkeys and cross-breeds	0.05%	0.14%	0.06%	0.08%	0.02%	0.01%	0.03%	0.02%	0.02%	0.03%
Pigs	4.9%	3.46%	2.69%	3.3%	3.96%	4.4%	9.06%	11.98%	7.05%	8.25%
Goats	0.01%	0%	0%	0.01%	0.02%	0.01%	0%	0.01%	0%	0.01%
Sheep	0.02%	0.02%	0.03%	0.03%	0.01%	0.03%	0.02%	0.02%	0.04%	0.18%
Cattle	0.25%	0.89%	1.71%	0.86%	0.54%	0.37%	1%	0.75%	2.5%	0.33%
Prosimians	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Baboons	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other mammals	0.02%	0.02%	0.01%	0.01%	0.02%	0.02%	0.01%	0.06%	0.01%	0.01%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Excel

Uses of non-human primates

Species	2022
Prosimians	6
Baboons	5
Total	11
Excel	

Proportions of uses of non-human primates

Species	2022
Prosimians	54.55%
Baboons	45.45%
Total	100%
Excel	

Uses of animals by main categories of scientific purposes

Excel

BASIC RESEARCH RELATED USES

Basic research related uses

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Oncology	5165	6312	6469	22009	18505	10434	11329	11583	7558	5275
Cardiovascular Blood and Lymphatic System	4793	4789	4268	5251	3719	2979	3347	3792	2470	2503
Nervous System	11617	15927	18149	15611	17260	17525	15570	16324	13640	12380
Respiratory System	1262	1601	2444	2608	279	859	472	657	717	178
Gastrointestinal System including Liver	2479	4618	2478	3676	6345	7331	7176	4766	5867	4219
Musculoskeletal System	2560	2723	2462	2935	1447	1334	1080	516	1000	356
Immune System	29147	19079	22727	25598	21078	16942	15894	12083	10466	7423
Urogenital/Reproductive System	2617	1538	2220	1119	1631	2396	2208	2019	1828	1217
Sensory Organs (skin, eyes and ears)	1503	876	77	401	386	522	501	649	693	627
Endocrine System/Metabolism	12509	13855	12359	11364	12212	14231	15198	12249	12757	10313
Developmental Biology	0	0	0	0	0	0	386	216	393	528
Multisystemic	883	949	485	215	2309	1995	2092	1792	4046	8417
Ethology / Animal Behaviour /Animal Biology	4906	25657	2363	6370	3669	659	1774	4297	179	1063
Other basic research	4263	4884	2898	4658	2699	389	0	12	2011	1528
Total	83704	102808	79399	101815	91539	77596	77027	70955	63625	56027

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TRANSLATIONAL AND APPLIED RESEARCH RELATED USES

Translational and applied research related uses

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Human Cancer	9107	27113	18429	8285	10162	18838	19036	19949	17214	10986
Human Infectious Disorders	4683	6632	7665	7899	9524	10334	9373	6955	6413	7825
Human Cardiovascular Disorders	1404	1786	2016	4200	4897	5010	4163	5158	3953	4072
Human Nervous and Mental Disorders	35559	34826	31340	27344	25481	20324	21327	21958	23286	18137
Human Respiratory Disorders	75	137	176	48	324	316	724	2461	3753	3405
Human Gastrointestinal Disorders including Liver	258	139	762	303	3081	2087	2285	2200	2243	1077
Human Musculoskeletal Disorders	400	401	378	398	736	862	957	1190	808	1528
Human Immune Disorders	9959	7015	4959	2678	3583	4509	3683	5940	3493	3427
Human Urogenital/Reproductive Disorders	66	641	647	904	2531	2263	3307	5153	7654	5161
Human Sensory Organ Disorders (skin, eyes and ears)	852	453	336	126	288	358	1002	926	805	542
Human Endocrine/Metabolism Disorders	39839	40915	37015	44717	40466	31167	26427	29262	24461	26280
Other Human Disorders	9137	9135	9168	6537	2641	58	676	822	3230	2767
Animal Diseases and Disorders	7934	19732	5708	9314	20308	35931	7131	13819	12589	15318
Animal Nutrition	0	0	0	0	0	0	85	209	624	245
Animal Welfare	3248	2524	1568	2516	2203	9265	14249	9897	6592	1908
Diagnosis of diseases	682	884	1023	1231	772	870	271	133	3066	584
Non-regulatory toxicology and ecotoxicology	141	666	787	526	126	1840	916	790	2090	1063
Total	123344	152999	121977	117026	127123	144032	115612	126822	122274	104325

ROUTINE PRODUCTION USES

Routine production uses

Purpose	2015	2017	2018	2019	2020	2021	2022	2023	2024
Blood based products	21	288	786	687	996	999	431	190	259
Monoclonal and polyclonal antibodies (excluding ascites method)	0	0	0	0	0	2876	2284	1415	1550
Other product types	0	456	0	34	110	111	47	1521	1303
Total	21	744	786	721	1106	3986	2762	3126	3112

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REGULATORY USES

Regulatory uses

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Quality control (incl batch safety and potency testing)	14819	8833	8139	18545	13681	15544	8115	5241	4605	3288
Other efficacy and tolerance testing	95	113	725	619	1375	1091	63	0	168	0
Toxicity and other safety testing including pharmacology	8021	12586	10257	4275	5064	2685	2569	6261	5917	2755
Total	22935	21532	19121	23439	20120	19320	10747	11502	10690	6043

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Regulatory uses by type of legislation

Type of legislation	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Food legislation including food contact material	0	0	0	0	9	0	154	0	0	0
Industrial chemicals legislation	1360	2458	2987	634	844	0	154	2920	2251	110
Legislation on medicinal products for human use	19630	17000	16100	22525	19183	19314	10435	8235	8411	5933
Legislation on medicinal products for veterinary use and their residues	142	4	0	0	0	0	0	0	0	0
Medical devices legislation	3	0	0	0	24	6	4	347	28	0
Other legislation	1800	2070	34	280	60	0	0	0	0	0
Total	22935	21532	19121	23439	20120	19320	10747	11502	10690	6043

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Proportions of regulatory uses by type of legislation

Type of legislation ♦	2015 ♦	2016 ♦	2017 ♦	2018 ♦	2019 ♦	2020 ♦	2021 ♦	2022 ♦	2023 ♦	2024 ♦
Food legislation including food contact material	0%	0%	0%	0%	0.04%	0%	1.43%	0%	0%	0%
Industrial chemicals legislation	5.93%	11.42%	15.62%	2.7%	4.19%	0%	1.43%	25.39%	21.06%	1.82%
Legislation on medicinal products for human use	85.59%	78.95%	84.2%	96.1%	95.34%	99.97%	97.1%	71.6%	78.68%	98.18%
Legislation on medicinal products for veterinary use and their residues	0.62%	0.02%	0%	0%	0%	0%	0%	0%	0%	0%
Medical devices legislation	0.01%	0%	0%	0%	0.12%	0.03%	0.04%	3.02%	0.26%	0%
Other legislation	7.85%	9.61%	0.18%	1.19%	0.3%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Excel

Type of requirement	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Legislation satisfying EU requirements	21113	19398	19021	23439	20116	19286	10660	11149	10690	6043
Legislation satisfying Non-EU requirements only	0	0	0	0	4	34	87	308	0	0
Legislation satisfying national requirements only [within EU]	1822	2134	100	0	0	0	0	45	0	0
Total	22935	21532	19121	23439	20120	19320	10747	11502	10690	6043

Proportions of regulatory uses by regulatory requirement

Type of requirement	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Legislation satisfying EU requirements	92.06%	90.09%	99.48%	100%	99.98%	99.82%	99.19%	96.93%	100%	100%
Legislation satisfying Non-EU requirements only	0%	0%	0%	0%	0.02%	0.18%	0.81%	2.68%	0%	0%
Legislation satisfying national requirements only [within EU]	7.94%	9.91%	0.52%	0%	0%	0%	0%	0.39%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Excel

REGULATORY USES: QUALITY CONTROL (INCLUDING BATCH SAFETY AND POTENCY TESTING)

Regulatory uses: Quality control

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Batch safety testing	3687	3295	2504	3484	2470	2366	2250	1983	910	1034
Batch potency testing	11105	5486	5601	15061	10272	13137	5193	3072	3695	2254
Other quality controls	27	52	34	0	939	41	672	186	0	0
Total	14819	8833	8139	18545	13681	15544	8115	5241	4605	3288

Excel

REGULATORY USES: TOXICITY AND OTHER SAFETY TESTING INCLUDING PHARMACOLOGY

Regulatory uses: Toxicity

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Acute and sub-acute	786	5366	3968	160	120	26	0	0	0	0
Skin irritation/corrosion	12	35	28	16	4	3	0	3	0	0
Skin sensitisation	138	80	177	118	74	32	0	49	16	0
Eye irritation/corrosion	6	0	0	0	0	0	0	0	0	0
Repeated dose toxicity	1755	1701	2205	2292	1612	1662	888	2135	2214	1959
Genotoxicity	0	0	0	0	22	0	44	132	60	21
Reproductive toxicity	0	0	935	480	35	0	0	0	0	0
Developmental toxicity	0	0	0	0	0	6	0	0	0	0
Kinetics	2095	267	818	361	510	205	427	166	257	428
Pharmaco-dynamics (incl safety pharmacology)	9	609	26	687	1386	751	902	530	611	211
Ecotoxicity	3080	4528	2100	154	1292	0	154	2883	2548	110
Safety testing in food and feed area	0	0	0	0	9	0	154	0	0	0
Target animal safety	120	0	0	0	0	0	0	0	0	0
Other toxicity/safety testing	20	0	0	7	0	0	0	363	211	26
Total	8021	12586	10257	4275	5064	2685	2569	6261	5917	2755

Excel

REGULATORY USES : TOXICITY AND OTHER SAFETY TESTING INCLUDING PHARMACOLOGY: ACUTE AND SUB-ACUTE TOXICITY TESTING METHODS

Regulatory uses: Toxicity: Acute and sub-acute

Purpose	2015	2016	2017	2018	2019	2020
LD50, LC50	80	5366	3968	0	0	0
Non lethal methods	706	0	0	160	120	26
Total	786	5366	3968	160	120	26
Excel						

REGULATORY USES: TOXICITY AND OTHER SAFETY TESTING INCLUDING PHARMACOLOGY: REPEATED DOSE TOXICITY

Regulatory uses: Toxicity: Repeated dose

Purpose	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
up to 28 days	1136	862	1382	1174	657	866	791	1346	1707	1351
29 - 90 days	488	229	586	895	651	502	97	243	274	394
> 90 days	131	610	237	223	304	294	0	546	233	214
Total	1755	1701	2205	2292	1612	1662	888	2135	2214	1959

Excel

REGULATORY USES: TOXICITY AND OTHER SAFETY TESTING INCLUDING PHARMACOLOGY: ECOTOXICITY

Regulatory uses: Toxicity: Ecotoxicity

Purpose	2015	2016	2017	2018	2019	2021	2022	2023	2024
Acute toxicity	0	0	120	154	182	154	63	297	110
Chronic toxicity	3080	3030	1800	0	1110	0	2820	2251	0
Endocrine activity	0	1440	0	0	0	0	0	0	0
Bioaccumulation	0	58	180	0	0	0	0	0	0
Total	3080	4528	2100	154	1292	154	2883	2548	110

Excel