

Table SINV-59

USPTO utility patents granted in biotechnology, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	4,203	4,229	3,652	4,127	3,752	3,399	2,978	2,589	3,590	3,548	3,229	3,352	4,284	4,369	4,494	4,735	5,303	5,342	5,530	5,757	5,773	6,106	6,236
North America	na	2,827	2,860	2,488	2,738	2,562	2,261	1,949	1,670	2,287	2,275	2,019	2,145	2,656	2,610	2,714	2,818	3,062	3,106	3,187	3,431	3,384	3,601	3,651
Canada	High	104	130	129	140	137	100	97	68	116	121	96	105	121	126	138	129	112	129	117	132	132	118	123
Mexico	Upper middle	3	2	3	4	2	2	2	1	1	0	1	3	4	2	4	4	4	2	4	4	4	5	7
United States	High	2,719	2,728	2,356	2,595	2,423	2,158	1,850	1,601	2,171	2,155	1,922	2,037	2,530	2,482	2,572	2,685	2,947	2,975	3,066	3,295	3,248	3,478	3,521
Central America and Caribbean	na	3	1	1	2	3	3	1	1	1	2	2	2	3	2	4	6	5	5	5	5	3	3	4
Puerto Rico	High	0	0	0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	1	1	2	1	1	2
South America	na	4	2	3	5	5	5	7	3	14	11	7	11	14	12	15	12	15	26	20	19	23	22	27
Argentina	Upper middle	1	1	0	1	0	0	3	0	5	2	1	4	5	3	1	2	3	4	4	3	7	6	4
Brazil	Upper middle	1	1	2	4	3	4	4	2	7	6	3	4	6	5	9	8	7	17	11	10	10	10	16
Europe	na	795	842	727	852	718	695	608	518	653	685	638	642	850	895	926	976	1,188	1,207	1,267	1,206	1,245	1,301	1,359
EU-27 + UK ^a	na	737	793	668	791	661	649	567	477	602	626	582	588	772	815	852	900	1,080	1,115	1,160	1,100	1,146	1,198	1,249
United Kingdom	High	148	178	144	170	141	114	106	83	106	119	98	108	129	137	147	142	146	183	173	165	175	215	223
EU-27 ^b	na	589	615	524	621	520	535	461	394	497	507	484	480	644	678	706	757	935	932	987	934	971	983	1,026
Austria	High	22	16	17	15	16	13	10	12	9	15	11	17	19	25	20	33	44	35	39	34	40	35	41
Belgium	High	40	47	41	38	40	31	33	22	28	40	28	35	43	42	42	46	50	48	54	66	61	57	56
Denmark	High	57	61	59	67	46	58	29	30	42	37	38	37	60	76	72	89	107	88	106	77	88	85	91
Finland	High	20	22	10	14	10	9	10	10	12	10	15	12	20	16	12	12	17	17	27	20	20	17	24
France	High	127	128	114	137	104	124	82	84	101	98	89	83	107	119	133	143	165	175	192	178	172	164	192
Germany	High	176	180	151	208	171	191	184	137	184	180	181	167	228	223	243	234	290	312	281	286	305	334	342
Hungary	High	4	2	1	4	3	4	7	3	3	3	1	1	3	2	4	1	3	5	8	6	2	2	2
Ireland	High	1	3	2	3	2	3	4	2	4	3	2	5	6	7	4	8	6	8	9	8	9	9	9
Italy	High	32	39	21	20	23	20	13	16	27	21	23	23	43	35	41	47	46	52	55	43	48	50	41
Netherlands	High	60	60	65	56	51	39	39	42	43	46	44	52	55	67	62	73	103	96	110	114	113	122	122
Spain	High	7	10	9	9	8	7	8	7	10	11	13	14	13	16	23	18	36	34	27	29	43	32	29
Sweden	High	35	36	27	39	38	36	36	23	27	35	32	23	30	36	39	34	50	43	42	52	46	54	62
Other Europe	na	58	49	58	61	57	46	41	42	50	58	56	54	78	80	74	77	107	92	107	106	99	102	110
Other Europe-2020 ^b	na	206	227	202	231	198	160	147	124	156	178	154	163	206	216	221	219	253	275	280	272	274	317	334
Belarus	Upper middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	5	8	8	6	3	7	8	5	4	7	6	10	9	10	10	12	15	17	18	19	14	16	19
Russia	Upper middle	10	5	9	7	12	6	7	10	9	17	16	15	20	25	14	15	17	12	17	12	12	10	8
Switzerland	High	41	35	40	46	38	30	23	25	35	29	28	26	45	43	46	45	67	59	68	71	71	74	80

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Ukraine	Lower middle	0	0	0	1	1	0	2	0	1	2	1	0	1	1	1	2	1	0	2	1	1	0	1
Asia	na	483	419	357	428	370	364	351	346	534	497	485	447	644	710	692	750	862	826	878	911	939	1,009	1,034
China	Upper middle	7	3	6	8	12	12	13	16	26	36	27	23	44	44	57	77	96	94	123	146	169	219	238
India	Lower middle	6	4	8	11	19	29	21	19	26	27	21	21	31	24	28	21	35	35	44	49	51	42	41
Japan	High	431	360	303	334	278	267	267	254	358	335	345	293	396	481	411	440	472	451	438	379	370	376	412
Malaysia	Upper middle	0	1	0	0	0	0	0	1	1	3	3	2	5	3	4	4	7	3	2	2	3	1	4
Singapore	High	4	3	3	3	1	4	4	4	9	7	7	8	7	9	18	20	27	26	34	31	42	46	36
South Korea	High	18	31	23	42	34	36	26	34	72	59	45	59	97	100	101	122	151	146	170	224	225	243	228
Taiwan	High	16	14	11	29	25	16	18	17	39	29	36	40	58	49	72	64	74	67	62	71	67	77	71
Middle East	na	35	42	30	35	34	37	26	16	37	33	30	44	50	59	65	81	82	89	92	108	100	93	98
Israel	High	35	42	29	34	34	37	26	16	37	32	30	44	50	58	62	79	73	84	85	99	87	78	85
Africa	na	1	3	3	4	3	2	1	0	2	2	2	3	4	4	4	6	4	11	9	5	4	8	3
South Africa	Upper middle	1	1	1	2	2	1	1	0	1	1	1	2	2	3	3	4	3	8	8	4	2	7	2
Australia and Oceania	na	54	59	43	62	57	33	36	34	61	43	47	57	64	76	73	85	84	71	71	71	73	67	58
Australia	High	51	52	38	58	45	27	27	31	49	37	40	46	51	62	59	69	64	56	55	58	62	57	48
New Zealand	High	3	7	6	4	11	5	8	3	12	7	7	11	13	14	14	16	20	15	15	13	11	10	10
Unclassified	na	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	1

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom; USPTO = U.S. Patent and Trademark Office.

^a The United Kingdom was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. China includes Hong Kong.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.