

TABLE S8-17

USPTO patents and patent families granted in medical technology, by region, country, or economy: 1998–2018

(Number)

Region, country, or economy	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018	
	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families		
China	11	93	10	65	9	179	5	187	15	144	19	297	15	433	19	377	21	500	21	544	25	843	41	1,294	76	1,390	73	1,769	103	2,586	112	3,242	122	4,819	183	5,576	222	6,516	272	7,285		
India	4	2	4	3	3	2	4	5	1	1	5	3	7	7	4	3	12	7	5	11	6	6	11	6	10	14	6	22	11	39	9	50	11	52	8	60	11	71	19	77	18	
Japan	508	2,011	474	1,933	445	1,810	504	1,666	584	1,577	669	1,784	532	2,095	430	2,229	559	2,197	547	2,540	569	2,941	547	3,248	826	4,252	889	4,526	1,137	4,444	1,272	4,938	1,305	5,195	1,305	3,333	1,200	4,144	1,262	4,129	1,320	3,968
Malaysia	0	0	0	0	2	1	1	1	5	5	4	4	3	3	2	3	2	3	0	4	2	3	1	5	3	2	17	3	5	4	16	5	23	7	26	6	11	9	12	4	25	
Singapore	3	2	2	2	2	1	4	1	4	3	6	5	1	3	2	3	6	2	3	1	9	4	9	3	11	4	22	4	20	2	33	8	31	8	26	4	29	5	31	9		
South Korea	22	107	25	212	29	120	34	145	43	242	69	428	37	467	38	906	45	1,420	39	1,468	49	1,202	45	940	72	1,221	85	1,880	114	2,223	151	2,391	201	2,632	223	2,366	262	2,996	318	3,017	400	3,029
Taiwan	63	79	61	99	76	97	67	98	101	139	77	141	97	170	93	211	113	269	81	262	73	138	55	148	78	174	97	192	156	279	155	387	147	435	170	673	179	772	214	475		
All others	3	5	3	5	1	2	1	7	5	9	1	10	0	7	2	7	1	7	2	16	1	7	2	9	2	6	2	4	6	12	4	7	7	16	8	9	8	10	8	17	6	12
Middle East	101	49	88	45	96	64	146	61	163	68	167	81	135	46	99	42	142	48	113	31	166	42	233	48	264	63	294	66	407	88	457	72	411	80	452	119	524	105	506	95		
Israel	100	43	85	39	94	35	142	43	162	55	165	62	133	37	99	30	140	37	112	27	111	23	164	36	231	43	254	51	285	54	373	59	430	54	379	54	418	86	485	73	456	61
All others	1	5	3	6	1	30	4	18	1	13	3	19	2	8	0	12	2	11	1	3	5	10	2	6	2	5	9	12	10	12	34	28	27	21	31	25	34	33	39	32	50	33
Africa	9	27	7	27	11	28	4	26	7	45	10	53	5	42	7	20	12	27	5	56	3	50	6	38	9	11	17	16	10	17	16	13	14	6	17	6	19	4	19	4		
South Africa	8	19	6	21	11	8	3	11	4	24	6	26	4	24	5	17	9	21	4	38	2	36	5	31	7	13	8	2	13	5	3	12	3	11	1	13	1	13	1	14	1	
All others	0	9	0	6	0	20	1	15	3	21	4	26	1	18	2	4	3	5	0	18	1	14	1	7	2	4	9	4	10	2	17	5	10	3	5	3	4	4	2	5	3	
Australia and Oceania	54	46	59	50	68	58	58	87	82	119	90	52	73	63	71	64	99	67	71	76	64	74	78	69	110	80	161	96	141	116	204	178	216	168	221	285	178	231	220	81	239	75
Australia	50	45	54	42	60	57	53	86	67	119	77	51	56	63	58	63	84	65	65	75	60	74	70	69	95	80	148	95	115	114	184	176	195	166	187	283	149	230	174	80	180	74
New Zealand	4	1	6	4	8	1	5	0	15	1	13	1	17	1	12	1	15	2	7	1	4	0	7	0	14	0	26	2	20	2	21	2	34	2	29	1	46	1	59	1	59	
All others	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unclassified	0	69	1	25	2	14	0	2	0	9	0	2	0	1	0	23	0	9	0	0	0	1	0	5	0	0	1	3	0	0	0	1	2	2	3	0	5	0	2	0	2	0

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

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. International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2012) is used to fill in missing information on priority patents using information in successive filings within the patent families (see technical documentation for details). Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in the year for which its output is accounted. The EU includes 28 member countries. China includes Hong Kong.

Source(s)

Science-Metrix; PATSTAT, accessed April 2019; PatentsView, USPTO, accessed June 2019.