

Biotech patenting slows in 2004

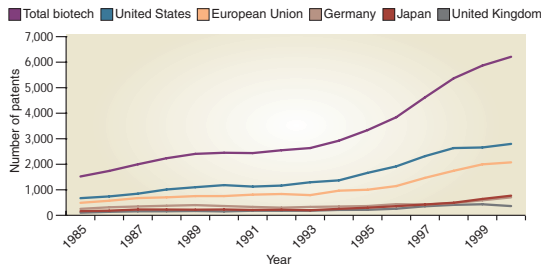
Stacy Lawrence

Biotech patenting appears to have peaked in 1999 in both absolute and relative terms, whereas pharmaceutical patenting hit its high in 2002; in contrast, information technology patents continue to grow apace. Two areas of biotech where patenting remains buoyant are RNAi and kinases,

whereas stem cell patent applications fell by more than half last year. In terms of US patents, the University of California System remains the preeminent institution; Human Genome Science, Caliper Technologies and Immunex saw dramatic increases in approved patents.

Geographical distribution of European biotech patent inventors

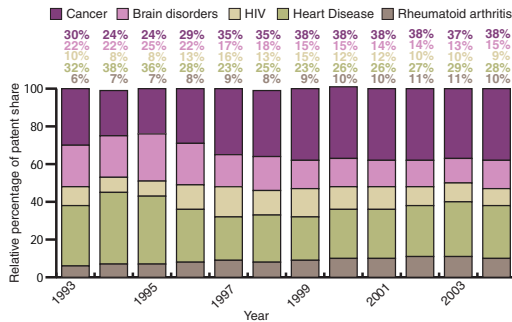
Available data tracking European patents lags compared with the US, but reflects the biotech boom in patenting at the end of the 1990s



Data by priority year and for the European Patent Office. Source: Organisation for Economic Co-operation and Development

Relative patent share of 5 therapeutic areas

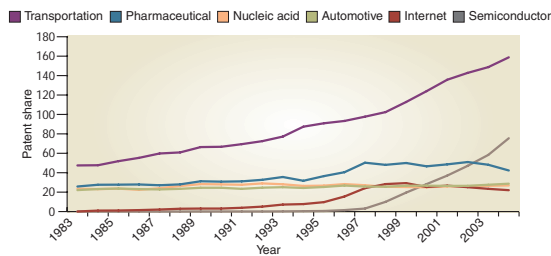
The number of patents relevant to rheumatoid arthritis and cancer is increasing compared with HIV and brain disorders



USPTO data. adapted from source. Source: Finnegan, Henderson, Farabow, Garrett & Dunner

Biotech and pharmaceutical patents as a share of total US patents

Since early this decade, US biotech and pharma patenting has continued to decline in absolute numbers and as a share of total patents.



Includes other related terms. Based on terms in specification of USPTO patents by approval year. Patent share is the number per one thousand patents. Source: Finnegan, Henderson, Farabow, Garrett & Dunner

Top 20 organizations with most US biotech patents approved

2004		2003	
Institution	Number of new patents	Institution	Number of new patents
University of California	118	University of California	132
US	87	US	94
Human Genome Sciences	82	Amplera	78
SIS Pharmaceuticals	65	Genentech	55
Amplera	54	ISIS Pharmaceuticals	54
Genentech	54	Human Genome Sciences	46
Millennium Pharmaceuticals	48	Millennium Pharmaceuticals	42
E.I. duPont	48	University of Texas	41
Affymetrix	45	E.I. duPont	37
Corixa	42	Pioneer Hi-Bred	36
Pioneer Hi-Bred	41	Affymetrix	33
University of Texas	41	Bayer	29
Caliper Technologies	35	Columbia University	27
Immunex	35	Johns Hopkins	27
SmithKline Beecham	33	Pharmacia	25
Monsanto	31	Agilent	24
Columbia University	28	Fuji Photo	23
Cornell University	27	SmithKline Beecham	22
Genencor International	25	Harvard	21
California Institute of Technology	23	California Institute of Technology	19

USPTO patents featuring the term 'nucleic acid' in the specifications of the patent. Source: Finnegan, Henderson, Farabow, Garrett & Dunner. University, Government, Business.

Research terms in approved US patents and patent applications

Issued patents			Published applications		
Term	Number per one thousand patents	Percent change from 2004	Term	Number per one thousand applications	Percent change from 2004
RNA interference or RNAi	0.26	125%	RNA interference or RNAi	3.66	70%
Transgenic	10.85	8%	Kinase	30.12	30%
Gene therapy	7.79	-1%	Catheter or stent	25.26	-2%
Stem cell	2.94	-1%	Heart disease	47.04	-6%
Polymerase chain reaction	12.31	-3%	Pharmaceutical	79.78	-13%
Kinase	14.81	-4%	Brain	29.03	-13%
Nucleotide	22.1	-4%	Protein	92.67	-15%
Hybridoma	6.47	-5%	Cancer	64.86	-17%
Nucleic acid	22.03	-6%	Peptide	56.59	-22%
Peptide	29.56	-6%	Amino acid	58.68	-23%
Brain	15.3	-7%	Antibody	52.22	-24%
Antibody	26.75	-8%	Reverse transcriptase	15.64	-25%
Genomic	16.12	-8%	Arthritis	24.69	-25%
Monoclonal	18.24	-9%	Nucleic acid	43.48	-29%
Growth factor	10.66	-9%	Monoclonal	36.08	-30%
Amino acid	31.39	-9%	Protease	26.63	-30%
Protein	50.65	-9%	Drug delivery	19.63	-30%
Protease	14.27	-10%	Nucleotide	41.32	-31%
Cancer	33.21	-11%	Growth factor	23.87	-31%
Drug delivery	8.63	-11%	HIV or immunodeficiency	21.01	-33%
Reverse transcriptase	6.57	-12%	Transgenic	22.32	-35%
Pharmaceutical	42.33	-12%	Genomic	31.27	-36%
HIV or immunodeficiency	9.66	-16%	Polymerase chain reaction	25.64	-37%
Arthritis	11.44	-17%	Gene therapy	17.09	-42%
Heart disease	25.19	-17%	Hybridoma	13.27	-48%
Catheter or stent	15.53	-18%	Stem cell	8.27	-53%

2004 USPTO data. Cancer, arthritis, heart disease and brain include related terms. Searched term in specifications of patent or application. Source: Finnegan, Henderson, Farabow, Garrett & Dunner

