

In Depth: Patents in Connecticut

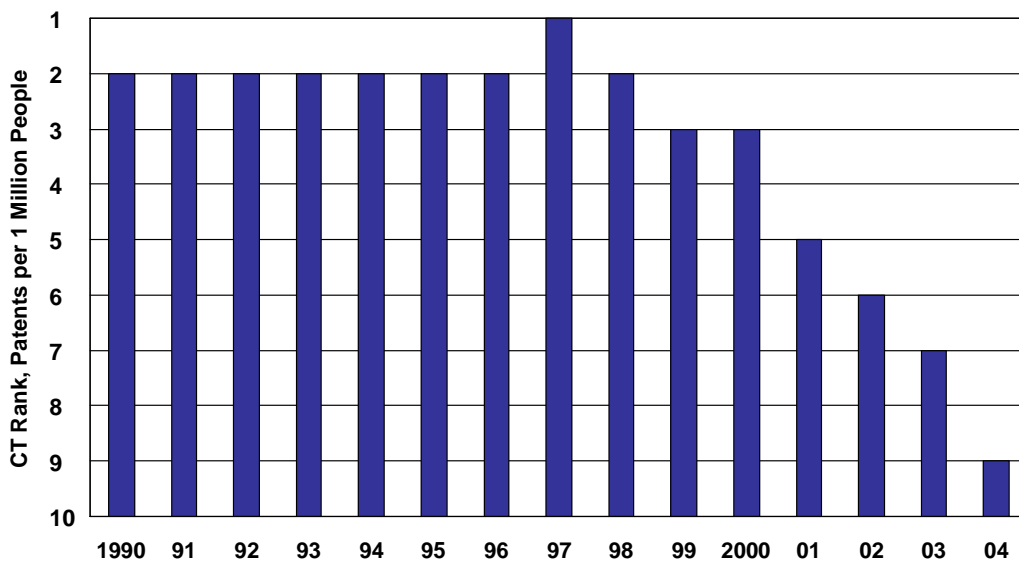
*A Research Brief Prepared by Alissa DeJonge, Economist
June 2006*

The number of new patents issued is an important indicator of the level and success of R&D activities occurring in a given state. The ability of individuals and companies to obtain patents speaks to an area's entrepreneurial and business vitality, as discussed in CERC's 2005 benchmarks report (www.cerc.com/benchmarks).

This research brief begins with a review of a common metric that is compared across all states: patents awarded per one million people.

In 2004, 1,722 patents were awarded to individuals or organizations in Connecticut. On a per capita basis, Connecticut received 491.5, which was the 9th highest ratio in the nation. This is an impressive ranking, except that as seen in the figure below, Connecticut was either 1st or 2nd between 1990 and 1998, with the highest ratio being 632.8 in 1998. Since then a number of additional states have performed better.

Connecticut's Per Capita Patent Rank: Still in the Top 10, But Falling



Sources: U.S. Patent & Trademark Office, U.S. Census; Calculations by CERC

Which states were performing better than Connecticut in 2004? Idaho was first, followed by Vermont, Massachusetts, California, Minnesota, Oregon, New Hampshire and Colorado.

A frequent criticism about patent data is that companies can and do register for a patent at the location of their headquarters rather than at the location of the research. As a result, patent data can be skewed. In order to see if this is occurring in Connecticut, the table below lists the companies that have generated more than half of the patents in the state during the past five years. Almost 17 percent, or 1,208 patents, were filed by individuals. Besides General Electric and United Technologies, the majority of the companies have headquarters that are out of state, or multiple locations within the state. Perhaps the headquarters criticism may not have as large an impact in Connecticut as originally thought.

Organizations Generating the Most Patents in Connecticut, 2000-2004

First-Named Assignee	2000	2001	2002	2003	2004	Total
Total	1,478	1,518	1,478	1,365	1,268	7,107
~Individually Owned Patent	285	277	243	232	171	1,208
PFIZER INC.	97	108	133	130	96	564
PITNEY-BOWES, INC.	69	74	69	77	105	394
INTERNATIONAL BUSINESS MACHINES CORP	63	53	62	50	62	290
UNITED TECHNOLOGIES CORPORATION	75	68	53	46	46	288
GENERAL ELECTRIC COMPANY	39	60	65	30	31	225
WALKER DIGITAL, LLC	27	67	35	34	24	187
NEUROGEN CORPORATION	27	37	38	15	8	125
OTIS ELEVATOR COMPANY	23	20	46	19	13	121
ADVANCED TECHNOLOGY MATERIALS, INC.	31	19	27	24	17	118
BRISTOL-MYERS SQUIBB COMPANY	22	24	25	15	19	105
YALE UNIVERSITY	24	22	19	23	14	102

Source: U.S. Patent & Trademark Office

The final table below looks at Connecticut's patents through yet another lens. The patents are shown according to technology class, which is decided by the primary classification assigned to the patent. The classes with at least 100 patents between 2000 and 2004 are shown. The majority of the patents are related to bioscience industries.

Technology Classes Generating the Most Patents in Connecticut, 2000-2004

Class Title	2000	2001	2002	2003	2004	Total
Drug, Bio-Affecting and Body Treating Compositions (includes Class 514)	166	211	228	180	144	929
Organic Compounds (includes Classes 532-570)	66	68	70	61	53	318
Synthetic Resins or Natural Rubbers (includes Classes 520-528)	45	63	39	50	40	237
Chemistry: Molecular Biology and Microbiology	37	51	45	45	34	212
DP: Financial, Business Practice, Mgmt or Cost/Price Determination	66	44	51	22	27	210
Chemistry: Electrical Current Producing Apparatus, Product and Process	22	23	35	39	45	164
Stock Material or Miscellaneous Articles	35	23	24	32	22	136
Surgery (includes Class 600)	38	29	27	21	20	135
Electrical Connectors	25	28	26	15	18	112
Radiant Energy	19	26	28	15	20	108
Semiconductor Device Manufacturing: Process	22	25	16	18	20	101
Amusement Devices: Games	15	33	16	23	14	101

Source: U.S. Patent & Trademark Office

Although the absolute number of patents in Connecticut has fallen by 250 between 2001 and 2004, and on a per-capita basis Connecticut is losing its preeminence as an overall patent leader, there are still a number of individuals and companies in the state conducting research and generating substantial numbers of patents. Research in the biosciences is generating a substantial share of the patents in the state.