

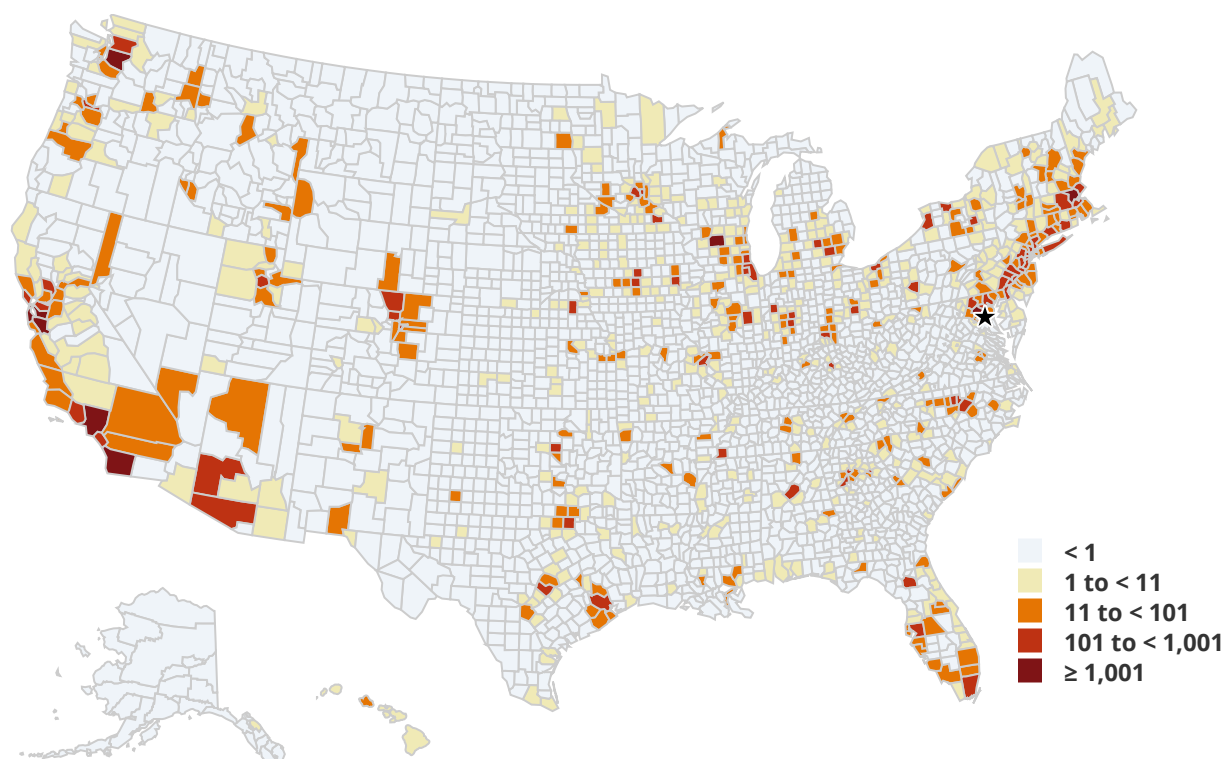


InfoChart

Coastal Counties in the West and Northeast Lead the United States in Biotechnology Utility Patents Granted to Residents between 2000 and 2020

NSF 23-341 | June 2023 | Carol Robbins, Dalia Abbas, and Bryan Cosby

Figure 1 | USPTO utility patents granted to U.S. inventors in biotechnology by U.S. county: 2000–20



USPTO = Patent and Trademark Office.

Note(s): Utility patents are fractionally allocated among counties based on the proportion of residences of all named inventors. *Science and Engineering Indicators 2022* classifies patent data into 35 comprehensive and nonoverlapping technology fields, which are based on the World Intellectual Property Organization's 2008 International Patent Classification (<https://www.wipo.int/classifications/ipc/en/>). Patents identify inventions that may later be introduced into use as an innovation. Inventions are also protected by trade secrets and other forms of protection. Differences between technology classes are affected by the propensity to patent a particular type of technology, among other reasons.

Source(s): National Science Board, National Science Foundation. 2022. Invention, Knowledge Transfer, and Innovation. [Public Use file Supplemental Workbook INV-1](#). *Science and Engineering Indicators 2022*. NSB-2022-4. Alexandria, VA. Available at <https://ncses.nsf.gov/pubs/nsb20224/>.

Residents of San Diego County, California received the highest number of biotechnology utility patents (3,824) for a single U.S. county between 2000 and 2020. The second-largest single-county number of biotechnology patents issued was to residents of Middlesex County, Massachusetts (3,197), where the city of Cambridge, with an active life sciences industry, is located. The third- and fourth-highest numbers of utility patents were granted to residents of two California counties:

San Mateo (2,462) and Santa Clara (2,302). In total, these four counties alone accounted for over 20% of the more than 50,000 biotechnology utility patents issued nationally. Both regions of California are home to many biotechnology companies. Outside of the coasts, residents of Dane County, Wisconsin, where the city of Madison is located, were granted the relatively high number of 1,021 biotechnology utility patents over the 20-year period.

Utility patents provide legal protection to novel and potentially useful inventions; the location where inventors reside is a geographic measure of innovative activity. The map above shows the cumulative number of Patent and Trademark Office utility patents granted in biotechnology between 2000 and 2020 to inventors residing in each U.S. county.

Suggested citation: [Robbins C](#), Abbas D, Cosby B; National Center for Science and Engineering Statistics (NCSES). 2023. *Coastal Counties in the West and Northeast Lead the United States in Biotechnology Utility Patents Granted to Residents between 2000 and 2020*. NSF 23-341. Alexandria, VA: National Science Foundation. Available at <https://ncses.nsf.gov/pubs/nsf23341/>.

Correction(s)

12 September 2024: This product's text has been corrected to properly place the biotechnology contributions of the city of Cambridge in Middlesex County, Massachusetts. The original text incorrectly identified Boston as a city in Middlesex County. Boston is within Suffolk County, Massachusetts. The county data within the figure is unaffected.