CSET CENTER for SECURITY and EMERGING TECHNOLOGY

Summary of Bayh-Dole Patent Trends

The Bayh-Dole Act, enacted in 1981, permits universities, companies, and other private entities that conduct federally funded research to retain ownership of any patents they generate through that research. In this brief, we examine broad trends in Bayh-Dole patents to shed light on the role federal funding plays in the U.S. patenting landscape.

We found that Bayh-Dole patents make up a relatively small share of overall U.S. patents, but they are much more prevalent in certain technology fields, particularly those related to biosciences and national defense.

- Bayh-Dole patents accounted for roughly 2 percent of all U.S. patents issued between 1981 and 2020.
- During that period, Bayh-Dole patents were especially prevalent in the fields of biotechnology (15 percent of overall patents), nanotechnology (11 percent), weapons manufacturing (10 percent), and pharmaceuticals (8 percent).
- In 2020, about 3 percent of AI patents and 2 percent of robotics patents were Bayh-Dole patents, though the share was higher in the past.

The top federal funders of research that produces Bayh-Dole patents have shifted over time.

- In 2020, the top patent-funding agencies were the National Institutes of Health (30 percent), the Department of Defense (22 percent), and the Department of Energy (15 percent).
- Among DOD funding sources, the Air Force, Army, Navy, and DARPA each funded a similar number of patents in 2020.
- The top recipients of Bayh-Dole patents are large research universities and companies that do substantial government contracting work.

While our analysis sheds some light on major trends in the Bayh-Dole patent landscape, more research is required to understand the law's role in the broader U.S. innovation ecosystem. Future analysis of patent licensing data, technology transfer trends, and the economic effects of march-in rights would help policymakers better understand the law's strengths and weaknesses, and identify potential reforms that would help maximize the social and economic benefits of publicly funded research.

For more information:

- Download the report: https://cset.georgetown.edu/publication/bayh-dole-patent-trends
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