

The U.S. Bioscience Industry Fosters Innovation and Drives America's Economy **Forward**

The bioscience industry and its supporting ecosystem drive bold innovations to address unmet human needs in the U.S. and around the world, including developing new breakthrough therapies that treat deadly diseases. The collective efforts of the industry and our public and private stakeholders have met the challenges of the COVID pandemic head-on, while lessening the impacts of climate change and nourishing a growing global population.



- The nation's bioscience industry **employed 2.1 million employees** across more than 127,000 U.S. business establishments in 2021.
- As the overall economy shed 1.5% of its job base, the biosciences industry has **increased employment by 11%** since 2018.
- In total, the bioscience industry's economic **impact on the U.S. economy amounted to \$2.9 trillion dollars in 2021**, as measured by overall output.
- Biotech companies – especially small- and mid-sized – undertook a monumental effort to develop COVID-19 vaccines and therapeutics; there are **747 novel compounds in development** currently.

DIRECT IMPACT



Bioscience Industry Employment
2.14M

TOTAL IMPACT

Employment **10.3M** 

Wages & Benefits **\$796B** 

Economic Output **\$2.9T** 

State & Local Taxes **\$102B** 

Federal Taxes **\$169B** 

BIO Member Companies Drive Growth, Deliver New Drug Innovations to Patients

The bioscience industry has outperformed the overall economy in recent years in both its employment growth as well as productivity standards, including vs. other knowledge- and technology-intensive industry sectors, such as technology and aerospace manufacturing.



Source: TEconomy Partners analysis of U.S. Bureau of Labor Statistics, QCEW data; enhanced by Lightcast (Datarun 2022.3).

The bioscience industry—called upon to innovate, manufacture, and distribute critical COVID-related diagnostics, vaccines, and therapeutics during this period—has not only outperformed the overall economy, but also other knowledge- and technology-intensive industry sectors in its employment growth.

A November 2010 landmark study laid out the importance of biotech to the US and global innovation ecosystem, indicating that drugs initially discovered in biotechnology companies or universities accounted for approximately half of the scientifically innovative drugs approved. Since publication of that study:¹

55% of all U.S.-originated therapies have been developed by small biopharma firms.

120 of 363 total FDA approvals between 2011 and 2020 were developed by US-based small companies with less than **\$500 mil** in revenue.

The dominance of American biopharma in global innovation has increased – the U.S. is responsible for **95% of the increase of 111 total FDA approvals since 2010**.

Since 2018, bioscience employers grew their payrolls by **11 percent** while the overall private sector experienced a net jobs decline of **1.5 percent**, due to the steep job losses experienced during the initial pandemic wave and economic shutdowns of 2020. Industry establishments and average wages also **have risen at double-digit rates**.

Highlights of State Industry Performance

Thirty-four states and Puerto Rico have a specialization in at least one of the five bioscience subsectors in 2021. These include:

17 states specialized in Agricultural Feedstock & Industrial Biosciences

9 states and Puerto Rico specialized in Bioscience-related Distribution

12 states and Puerto Rico specialized in Pharmaceuticals

14 states and Puerto Rico specialized in Medical Devices & Equipment

9 states and Puerto Rico specialized in Research, Testing & Medical Laboratories

¹ Data from 2022 Vital Transformation study seeking to update the Kneller 2010 study