



# The New Jersey Biotechnology Industry Study

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A study of New Jersey's biotechnology industry conducted by Rutgers University Graduate School of Management for the Biotechnology Council of New Jersey (BCNJ) confirms that the industry is thriving in New Jersey. The combination of the presence of the world's largest concentration of research-based pharmaceutical and medical technology companies, access to capital in both public and private markets, and legislation that promotes the industry all contribute to its increasing strength.

The study, conducted in early 2001, found that the biotechnology industry contributes nearly \$4 billion to New Jersey's economy through direct, indirect, and induced impact. Direct and indirect impact together stand at \$3.1 billion.

The biotechnology industry employs approximately 7,500 people, with a median compensation package of \$83,380. These employees work in 110 companies across the state.

The biotechnology industry contributed approximately \$1.32 billion in research and development in New Jersey in the year 2000. On a national scale, New Jersey plays a key role – approximately 11% of all government and industry R&D dollars

are spent within the state of New Jersey, and 25% of all private R&D funds are spent here.

Thanks to New Jersey's innovative government programs, the biotech industry is well positioned to continue to grow in our state. New Jersey is on par with, or ahead of, other powerhouse biotechnology states. Few states can compete with our total package of R&D tax credits, investment tax credits, NOL (Net Operating Loss) tax credits, and other location incentives, placing New Jersey on the cutting edge of legislative advances for the industry.

All in all, New Jersey offers biotechnology companies numerous advantages that few states can match. We're pleased to release this report, showcasing a young industry that will continue to play a major role in our state's economy.

**NEW JERSEY'S BIOTECHNOLOGY INDUSTRY  
2000 ECONOMIC ACTIVITY  
SUMMARY OF CONCLUSIONS**

Total Biotechnology Companies:	110
Total Direct Employment:	7,500
Median Compensation Package:	\$83,380
Total Economic Impact:	\$3.9 Billion
Total R&D Expenditures:	\$1.3 Billion

H. Joseph Reiser, Ph.D.  
President and CEO  
CYTOGEN Corporation  
Chairman, BCNJ

Debbie Hart  
Executive Director  
BCNJ



## EMPLOYMENT

The biotechnology industry is a thriving employer in New Jersey.

The 110 biotechnology companies in the state employ approximately 7,500 people. These employees performed business functions that included clinical research, product development, corporate administration, and sales and marketing.

The median compensation package offered by these companies was placed at \$83,330.

### Impact on New Jersey's Economy

Using an economic assessment tool known as IMPLAN, the study constructed models and measured the economic impact by utilizing data files that are a compilation of all data assembled by federal, state, and local agencies that track economic and census data throughout the nation. The economic impact measured by IMPLAN is broken into three categories:

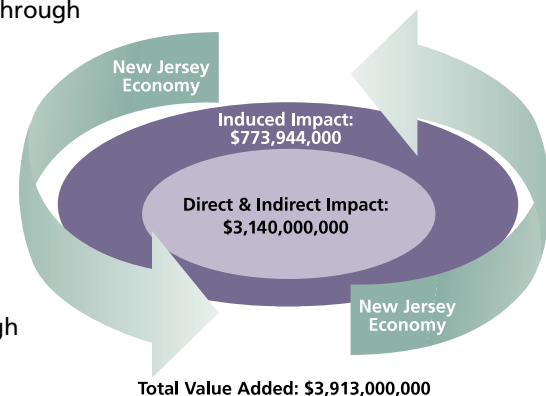
- **DIRECT** – the dollars in the economy accounted for by the revenues earned by the biotechnology firms in the state
- **INDIRECT** – the dollars infused into the economy through the purchase of goods and services by the biotechnology firms
- **INDUCED** – the infusion of dollars into the economy via the salary dollars spent by biotechnology employees

The biotechnology industry contributes a total of \$3,913,000,000 to the economy of New Jersey through direct, indirect, and induced impact.

Direct and indirect impact together stand at \$3,140,000,000.

This represents the aggregate of revenues and company expenditures on the purchase of goods and services, such as equipment, supplies, and waste management services. The remaining \$773,944,000 accounts for the induced impact of the biotechnology industry, specifically the spending of biotechnology employee salaries within the state.

Additionally, IMPLAN estimated the indirect business tax contribution of the biotechnology industry to the state of New Jersey at \$385,000,000. This includes property taxes, fees, licenses, and sales taxes paid by businesses.



## WHY NEW JERSEY?

New Jersey offers numerous incentives to biotech companies:

### Educated Workforce

Per capita, New Jersey has more scientists than any other state. The state is ranked 8th in the U.S. for educational attainment of individuals 25 years and older. In 1999, New Jersey's institutions awarded more than 13,000 high technology certificates and degrees, which represented an 18% increase over the last decade.

### Access to Capital

New Jersey's close proximity to the financial capital of the world provides the state's biotechnology companies added leverage when competing for access to capital. In 1999, \$816 million in venture capital funding was available to New Jersey biotechs.

### Supportive Government Agencies

New Jersey government agencies that assist biotechnology companies include the New Jersey Commerce and Economic Growth Commission, the New Jersey Economic Development Authority, the New Jersey Commission on Science and Technology, and Prosperity New Jersey. These agencies provide services that include grants, tax incentives, workforce readiness training, financing programs, loans, and business incentive programs.

Additional programs and organizations include utility company incentives, state-financed economic packages for the construction of new laboratories and the purchase of advanced technology equipment, and additional state dollars for matching funds for universities to attract federal research grants.

### Academic Research

New Jersey boasts the nation's largest health sciences university, University of Medicine and Dentistry of New Jersey (UMDNJ). Other research centers and universities that devote substantial resources to the field of pharmaceuticals, medicine, and the biological sciences include the Center for Advanced Biotechnology and Medicine, the Waksman Institute at Rutgers University, the Coriell Institute for Medical Research at UMDNJ, as well as the Center for Photonics and Optoelectronic Materials, and the Lewis-Sigler Institute for Integrative Genomics at Princeton University.

### Agreements and Alliance Opportunities

Alliances or mergers with one of the many pharmaceutical or biotechnology companies in New Jersey provide many opportunities for biotechnology companies to expand and grow. In 2000, more than 70 corporate/strategic alliances or joint ventures occurred between New Jersey biotechnology companies and an assortment of partners, including pharmaceutical corporations, biotechnology companies, and universities.

#### LEGISLATIVE COMPARISON OF LEADING BIOTECHNOLOGY STATES

	CA	MD	MA	NY	NC	NJ
R&D Tax Credit	12%		10-15%	9%	Yes	10%
Investment Tax Credit	Yes		3%	Yes	25%	2%
NOL	8 years		5 years	15 years	5 years	15 years
Employment Training Credit	Yes					
Job Creation Credit		Yes		Yes		Yes
Construction Savings	Yes		Yes			
Utility Savings	Yes					Yes
State Equity Investment Pool	Yes	Yes	Yes	Yes	Yes	Yes
Centers of Excellence	Yes (8)		Yes (3)	Yes	Yes	Yes (3)

### Biotechnology Legislation

New Jersey has led the nation in biotechnology-friendly legislation, including the net operating losses (NOLS) legislation. In 1998, New Jersey became the first state in the country to permit technology companies to "sell" their net operating losses to profitable companies for at least 75% of their value. The legislation allows these companies to sell their unused research and development tax credits as well.

A comparison of New Jersey with other leading biotechnology states shows that New Jersey is on par with, if not ahead of, other powerhouse biotechnology states.

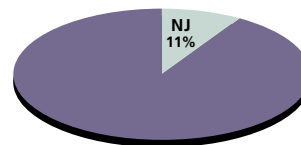


## RESEARCH AND DEVELOPMENT

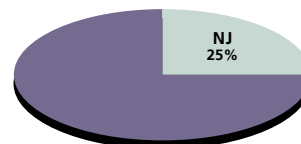
With so many biotechnology and pharmaceutical businesses located in New Jersey, it's not surprising that research and development (R&D) spending claims such a large proportion of both industry and government dollars.

In 2000, the biotechnology industry contributed approximately \$1.32 billion in R&D in New Jersey. On a national scale, New Jersey plays a key role, with approximately 11% of all government and industry R&D dollars spent within the state of New Jersey. Private R&D spending is even higher – 25% of all private R&D dollars are spent within the state of New Jersey.

NJ GOVERNMENT & INDUSTRY R&D SPENDING  
VS. REST OF THE NATION



NJ PRIVATE R&D SPENDING  
VS. REST OF THE NATION



## ABOUT THE BIOTECHNOLOGY COUNCIL OF NEW JERSEY

BCNJ was chartered in January 1994 to serve as a voice for biotechnology companies based in New Jersey, and those considering locating to the Garden State. The Council was formed by a group of concerned biotech executives to promote an environment conducive to the growth of the industry in New Jersey. It is comprised of representatives from the industry and related companies throughout the state.

BCNJ represents companies engaged in biopharmaceutical, biomedical, bioagricultural and bioremedial endeavors and is dedicated to creating opportunities that will enhance the economic growth and development of these companies. The Council works to promote research and development within the State's educational institutions, to expand technology transfer and innovative partnerships, and to launch an aggressive effort to meet the infrastructure and capital needs of the biotechnology industry. The Council serves as a liaison between biotech companies, government, the media, and the public.

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