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The Biotechnology  
Council of New Jersey  
2003 Economic Impact Survey





Dear Industry Member,

We are pleased to share with you the Biotechnology Council of New Jersey (BCNJ) 2003 Economic Impact Survey. It is clear that our industry makes a positive economic contribution to the prime business environment provided by the State of New Jersey.

The biotechnology industry supported nearly 8,000 jobs this year—up from 6,000 jobs a few years ago, and more than \$890 million in earnings. The ripple effect of these earnings account for an additional 9,600 jobs and close to \$420 million in earnings. Simply put, the total impact of New Jersey biotechnology firms contributes \$1.3 billion in income to state residents. We are proud and excited to report such impressive figures on behalf of the industry.

Just as importantly, this survey has revealed that nearly \$46 million is contributed to New Jersey through tax revenue. Those tax dollars are being put to very good use by contributing to educational programs, human services, and environmental protection, amongst many others.

Special thanks go to Governor James E. McGreevey and the New Jersey state government for their support of this industry, as well as the members of the biotechnology industry for making these opportunities possible, and helping to move us forward. Also, we thank Deloitte for their assistance on this important project.

The following overview illustrates how the relationship between our industry and New Jersey generates great opportunities enjoyed by both.

Yours in the BCNJ,

Kenneth I. Moch  
Chairman, BCNJ  
President and CEO, Alteon Inc.

Debbie Hart  
President, BCNJ



## About This Overview

The Biotechnology Council of New Jersey (BCNJ) commissioned Deloitte & Touche LLP to conduct this economic impact survey to illustrate the major role played by New Jersey's biotechnology industry in the state's economic well-being. This summary focuses on the business activities of biotechnology companies<sup>1</sup> in 2003 within the State of New Jersey. It is important to note that "biotechnology" encompasses businesses from several industries, and within a specific industry; a New Jersey-based establishment may perform a primary line of business that is different from its parent company, e.g., Wholesaling – Pharmaceutical and Medical Products, or Administrative Services.

The data for this assessment, drawn from 121 New Jersey businesses<sup>2</sup>, came from secondary data sources<sup>3</sup> and, to a lesser extent, responses from a field questionnaire. What follows is a snapshot for 2003 of the earnings and business generated to support biotechnology industry activities in New Jersey, and the positive ripple effects this had throughout the state's economy.

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<sup>1</sup> Pharmaceutical and medical technology companies were excluded from this analysis.

<sup>2</sup> A list of the companies included in these results is at the end of this summary.

<sup>3</sup> InfoUSA and Dun & Bradstreet provided data subscription services.



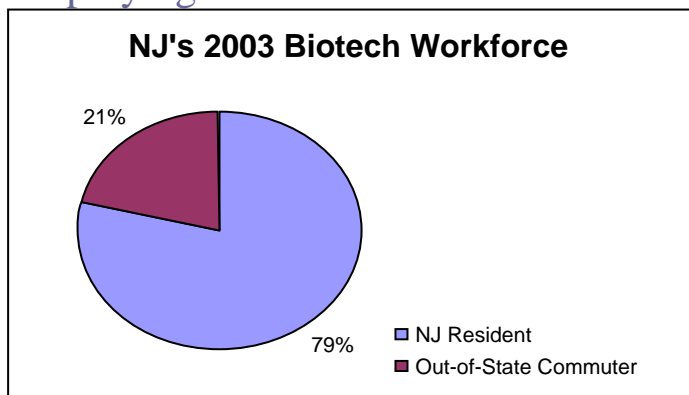
## Supporting New Jersey's Employment Health

The biotechnology industry contributed to the vibrancy of New Jersey's employment picture in 2003, in part by providing 7,834 full-time, biotechnology related jobs in New Jersey. As the table below shows, these jobs provided employment across a range of biotechnology-related industries.

### 2003 Employment in the Biotechnology Industry

Total Full-Time Equivalents	7,834
<b>by SIC</b>	
Drug Manufacturing	3,813
Toiletries Prep Manufacturing	109
Miscellaneous Chemical Manufacturing	190
Measuring & Control Device Manufacturing	398
Medical Equip & Supplies Manufacturing	954
Computer Equip Manufacturing	40
Wholesale-Pharmaceutical Products	594
Computer Services	23
Medical Laboratories	311
R&D Laboratories	1,395
Administrative Services	7

### Employing the State's Talent Pool



Although New Jersey is a "corridor state" where workers easily commute from either Pennsylvania or New York, respondents indicated that 79 percent of their workforce is drawn from state residents. The employment provided by the profiled companies is approximately 90 percent full-time.



In 2003, the 7,834 jobs provided by New Jersey’s biotechnology companies generated an estimated payroll of \$892.5 million. The portion going to New Jersey households was \$709.1 million (before state and federal taxes). The benefit of the superior payroll figure reaches farther than the individual employee – the income gains for New Jersey residents enabled consumer spending that created beneficial economic ripples throughout the state, as will be shown further.

The biotechnology industry provides employees with generous benefits. The average benefits in 2003 ranged from \$2,000 to \$26,600 annually; average base salary was identical to average total compensation in many cases; and where compensation exceeded the base salary, it did so in a range of 2 to 17 percent, with one exception of 42 percent higher.

### Goods & Services Required to Support the Biotechnology Industry

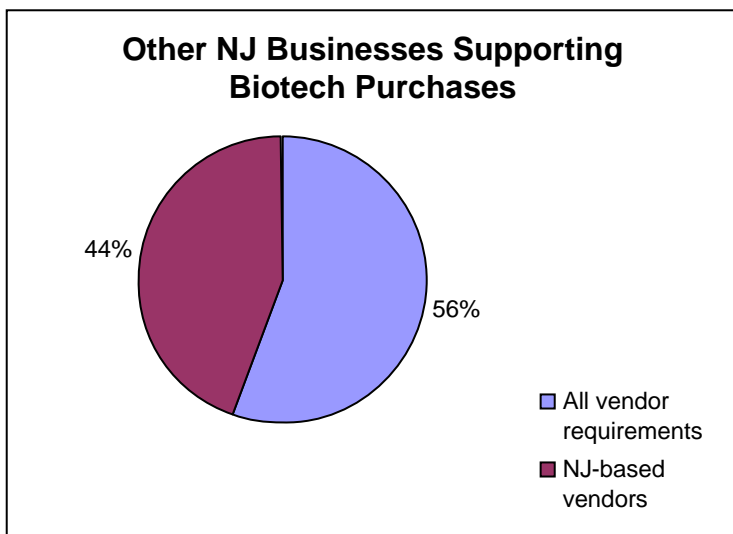
<b>Total of Vendor Requirements</b>	<b>\$1,122,200,326</b>
by SIC	
Drug Manufacturing	\$745,457,762
Toiletries Prep Manufacturing	\$17,981,314
Miscellaneous Chemical Manufacturing	\$46,637,400
Measuring & Control Device Manufacturing	\$71,067,676
Medical Equip & Supplies Manufacturing	\$110,627,053
Computer Equip Manufacturing	\$9,503,200
Wholesale-Pharmaceutical Products	\$28,029,940
Computer Services	\$550,206
Medical Laboratories	\$7,801,746
R&D Laboratories	\$84,415,509
Administrative Services	\$128,520



## Adding to Growth in the Garden State

In 2003, approximately \$1.12 billion was spent by industry companies to purchase the materials and services needed to support their biotechnology related activities. Of this total, 44.5 percent (\$499 million) was spent within New Jersey to state-based vendor businesses.

### Benefit to NJ Vendors



Biotechnology companies are involved in critical research and discoveries that have a positive impact on health. Similarly, the earnings and business generated by these biotechnology companies in 2003, particularly for New Jersey-based households and vendors, contributed to the state's economic health.



## Economic Benefits Created for Other NJ Businesses

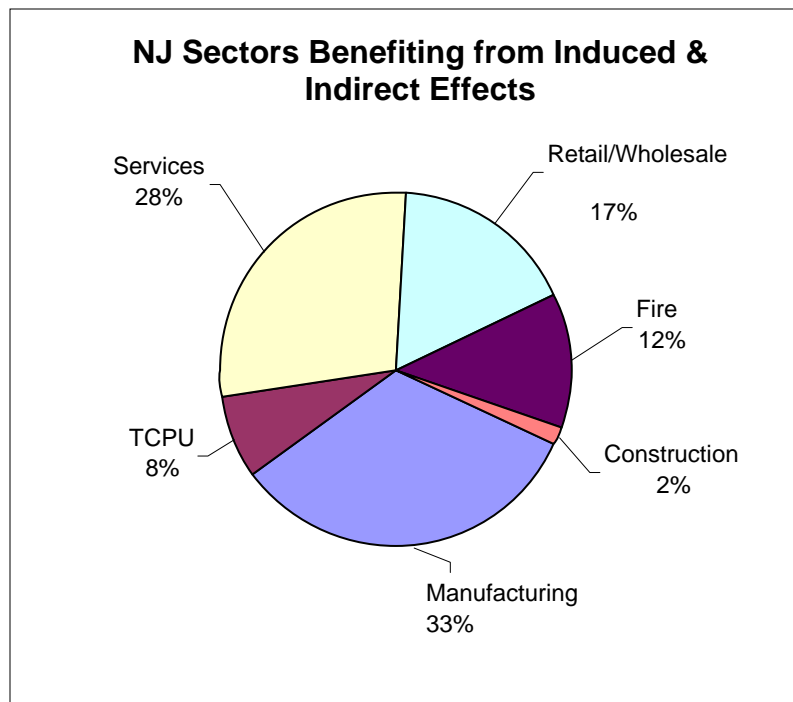
	Jobs Supported	Associated Earnings (mil., 2003)
<b>Induced effect of NJ consumers</b>	5,160	\$201.3
<b>Indirect effect on NJ vendors serving</b>	4,439	\$218.8
Drug Manufacturing	3,028	\$152.1
Toiletries Prep Manufacturing	72	\$3.4
Surgical & Med Equip Manufacturing	386	\$17.9
Miscellaneous Chemical Manufacturing	162	\$7.7
Analytical Device Manufacturing	237	\$11.3
R&D Laboratories	383	\$17.6
Medical Laboratories	31	\$1.5
Wholesale-Pharma Products	115	\$5.3
Computer Device Manufacturing	23	\$1.1
Computer Software Design	2	\$0.9
<b>Total of Additional Benefits</b>	<b>9,599</b>	<b>\$420.1</b>

The table above presents the additional jobs supported and the associated labor income generated by biotechnology activities. This employment and income benefit is *in addition* to the previously discussed 7,834 jobs and \$892.5 million in earnings provided by the biotechnology industry in New Jersey.



## Indirect & Induced Sales for New Jersey's Economy

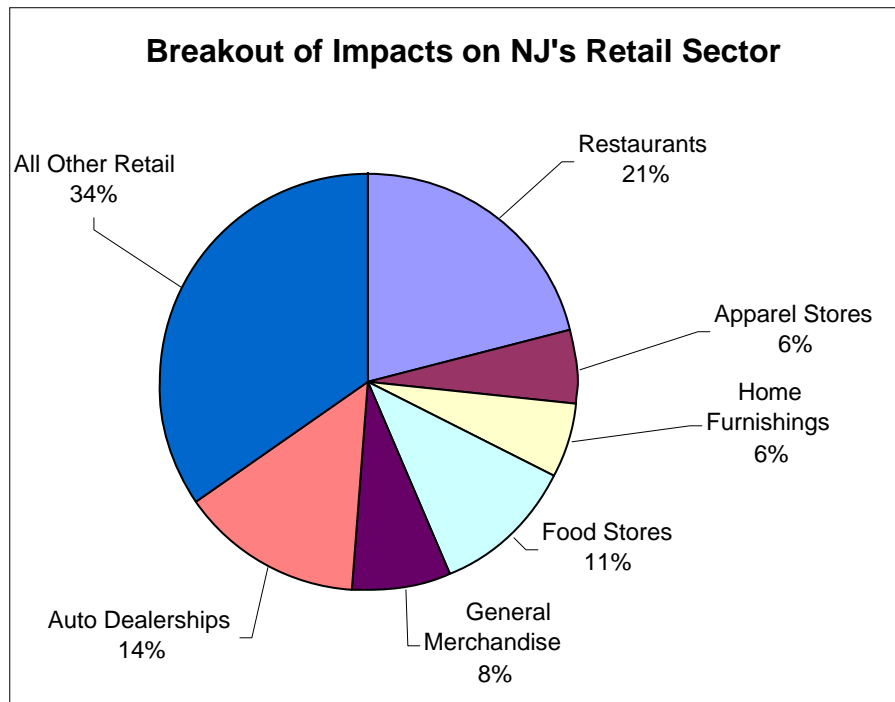
Household spending from wages earned with New Jersey's biotech companies and other employers in the state is on a broad class of *Services* (35%) followed by *Retail* purchases. The chart shows the profile of how households direct their retail purchases to other types of New Jersey businesses.



\*TCPU represents Transportation, Construction, Public Utilities.



## Allocation of Retail Purchases



## Total Employment and Earnings Impacts in NJ from Select Biotech Activities, 2003

<i>Source</i>	Jobs	Earnings (2003 \$)
Direct: NJ Biotech Companies*	7,834	\$892.5 m
Indirect & Induced	9,599	\$420.1 m
<b>Total</b>	<b>17,433</b>	<b>\$ 1.3 b</b>

\* Those companies that responded from among 121 examined



## What Our Tax Dollars Mean to the State

Our workforce contributes significantly to the tax revenue that provides many state services. Estimated total state income and sales taxes paid by the industry's resident - workers is estimated to be \$45.8 million. *Notably, this number does not include direct corporate taxes that members of the biotechnology industry pay directly to the state.*

Here is what that \$45.8 million in taxes paid by our workforce equates to in key State of NJ spending areas:

Income and Sales Taxes Paid By Our Employees Equals		New Jersey Service Areas	Total FY 2003 Expenditures (000's)
It's	0.6% of	Education	\$7,688,481
	1.1% of	Human Services	\$4,149,492
	3.2% of	Higher Education	\$1,419,900
	3.5% of	Transportation	\$1,298,216
	4.6% of	Health and Senior Services	\$1,002,016
	9.1% of	Law and Public Safety	\$504,859
	14.3% of	Environmental Protection	\$320,654

*(Source: Department of Treasury, Operations and Budget, NJ; 2003 Annual Report; ECG Research and Analysis)*



## Public Education

While impressive in terms of the industry's contribution to the state's economy overall, the following facts relating to public education, the state's largest expenditure item, lend some perspective on the \$45.8 million in taxes contributed by New Jersey's biotechnology Industry:

- \$45.8 million would support the yearly public education costs for over 8,211 students in the state in 2002.
- Among the population of low income pupils, \$45.8 million would pay for over 13.8% of the Early Childhood Development programs for the entire state in the year 2002. (Total costs for Early Childhood were \$330.6M.)
- \$45.8 million pays for 5% of all Special Education expenditures. (Total cost was \$896.4M in 2002.)
- \$45.8 million would pay for 70% of bilingual education programs. (Total cost per year held constant in 2002 to \$65.6M.)

*(Source: NJ Department of Education – Division of Finance)*



## List of Companies Assessed

3-D Pharmaceutical	ESP Pharma	Penick Corp.
Able Laboratories	Ethypharm Corp.	Pestka Biomedical Laboratories, Inc
Access Bio	Exsar Corp.	Pharmaceutical Formulations
Aesgen	G & W Laboratories	Pharmacopeia
Alfa Wasserman	Genmab	PharmaSeq
Alfacell	Genta	Pharmos
Algo Rx	Genzyme	Phytomedics
Alpharma	GPC Biotech Inc.	Plasmasol
Alteon Inc.	Gyros Microlabs	Polymerix Corp
Amicus Therapeutics	Haber	Powerzyme
Antyra	Hovione	Praelux
AppTec Lab Services	Hydromer	PrimeSyn Lab
Arch Personal Care Products	IGI	Princeton Biomedica
Barrier Therapeutics, Inc.	Immunomedics	Princeton Polymer
Biacore	I-Stat	Provid Pharma
BioDelivery Scientific	IVC Industries	PTC Therapeutics
Bioject Inc	Janssen Pharma	Purdue Frederick
BioMetallics	J-Star	RadPharm
Biomira	Laureate Pharma	Ranbaxy Pharma
BioReference Labs	Lexicon Pharmaceuticals	Replication Medical
Biosearch	Life Medical Sciences	Savient Pharma
BioTest Diagnostics	LifeCell	Scimedx
Biothane	LigoChem	Siegfried
Bracco Diagnostics	Linguagen	Songbird Hearing
Bradley Pharmaceuticals	Makari Research	Speedel Pharmaceuticals
Celgene	Medarex Inc.	Synthon Chiragencis
Cenogenics	Medicines Company	Systech Solutions
Chemspeed	Memory Pharmaceuticals	Taxolog, Inc.
Chiral Quest	Morphochem	Tissue Transformation Tech
Compugen Inc.	NeoStrata	Transave
Cytogen Corporation	New Brunswick Scientific	Tris Pharma
Derma Sciences	NexMed	Tutogen Medical
Diagnostic Specialties	Nika Health Products	Unigene
Dov Pharmaceuticals	Nova Flux	Valera Pharma
Elusys Therapeutics, Inc	NovaDel	VectraMed, Inc.
Envirogen	OEM Concepts	Vela Pharma
Enzon Pharmaceuticals	Orchid BioSciences	Vyteris
EpiGenesis Pharmaceuticals	Osteotech	Worthington Biochemical
EpiCept Corp.	Palatin Technologies	Xechem, Inc.
Epicore Networks (USA) Inc.	PBL	Xenna Corp.
		Xenogen



# Biotechnology Council of New Jersey 2003 Economic Impact Survey

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The Biotechnology Council of New Jersey was founded in 1994 by New Jersey Biotechnology industry CEOs to serve as the voice of the biotechnology industry in New Jersey. Since that time, BCNJ has been working around the clock to support, grow and promote the development of the state's rapidly expanding biotechnology cluster. The Biotechnology Council of New Jersey is single-minded in its commitment to the growth and prosperity of this important industry and welcomes the input of industry members on ways to bolster that mission. For more information, please visit the Biotechnology Council of New Jersey's web site at [www.biotechnj.org](http://www.biotechnj.org).

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