

New Jersey's Life Sciences Industry Cluster

Prepared by:
New Jersey Department of Labor & Workforce Development
Office of Research & Information
Bureau of Labor Market Information
Winter 2016 - 2017



STATE OF NEW JERSEY
DEPARTMENT OF LABOR AND
WORKFORCE DEVELOPMENT



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THE GOAL OF THIS REPORT IS TO GET AN “IDEA” OF WHAT LIFE SCIENCES MEANS TO NEW JERSEY

Identify the types of industries and establishments that make up the life sciences industry cluster based on a standard industry classification system.

Describe any similarities and differences among its components with regard to such variables as employment, wage, occupation type, education, and demographic characteristics.

Examine any present distinctions within the cluster and its components that give New Jersey a competitive advantage compared to neighboring states, regions or the nation, or show areas where New Jersey could improve to add to the state’s economy.

Analyze the current state of the life sciences industry cluster and provide an outlook for employment into the future.



LIFE SCIENCES INDUSTRY CLUSTER: OVERVIEW



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

MAJOR INDUSTRY COMPONENTS

New Jersey's Life Sciences employment in 2015 was identified within three primary components: pharmaceuticals (41.0%), biotechnology-R&D (38.3%) and medical device manufacturing (20.7%). The breakdown of the major segments are:

Pharmaceuticals

- Pharmaceutical and medicine manufacturing
- Soap, cleaning compound, and toiletry manufacturing
- Druggists' goods merchant wholesalers



Establishments that are primarily engaged in manufacturing or distribution of drug related products.

Consists of services related establishments primarily engaged in scientific research, development, analytic and/or diagnostics.



Biotechnology (R&D)

- Scientific research and development services
- Medical and diagnostic laboratories

Medical Devices

- Electronic instrument manufacturing
- Medical equipment and supplies manufacturing



Establishments primarily engaged in manufacturing medical equipment and supplies.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

MAJOR NEW JERSEY EMPLOYERS

Some of New Jersey's well-known employers in this cluster include:

Pharmaceuticals

- Actavis, Inc.
- Bayer HealthCare Pharmaceutical
- Bristol-Myers Squibb Co.
- Daiichi Sankyo
- Ethicon, Inc.
- Johnson & Johnson
- Merck & Co. Inc.
- Novartis Pharmaceuticals
- Pfizer, Inc.
- Sanofi, U.S.
- Teva Pharmaceuticals USA

Biotechnology (R&D)

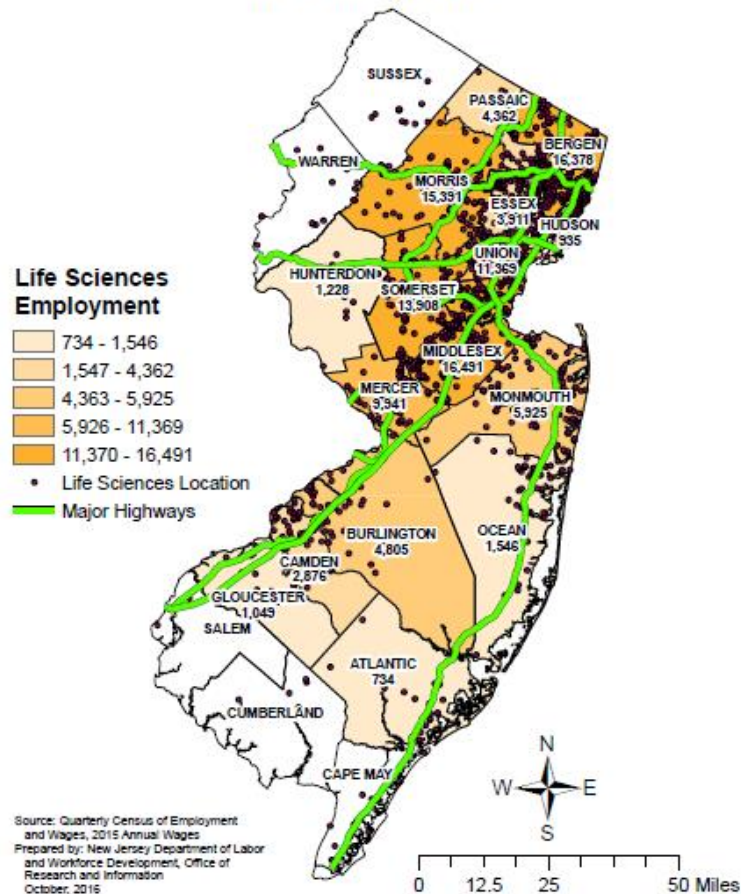
- Celerion, Inc.
- Chugai Pharma USA
- Collagen Matrix, Inc.
- Covance, Inc.
- ImClone System
- Immunomedics, Inc.
- Novo Nordisk, Inc.
- PAREXEL International
- Progenitor Cell Therapy
- PTC Therapeutics, Inc.
- Quest Diagnostics
- Sandoz, Inc.
- Siemens Hearing Instruments

Medical Devices

- Abbott Laboratories
- Becton Dickinson & Co.
- C. R. Bard, Inc.
- Honeywell International, Inc.
- Integra Life Sciences
- Micro Corp.
- Ortho McNeil Pharma
- Oticon, Inc.
- Roche Molecular Systems, Inc.
- Safilo USA, Inc.
- Sivantos, Inc.
- Stryker Orthopaedics

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER OVERALL STATE IMPACT

*Life Sciences Employment and Establishment Locations
New Jersey, 2015*

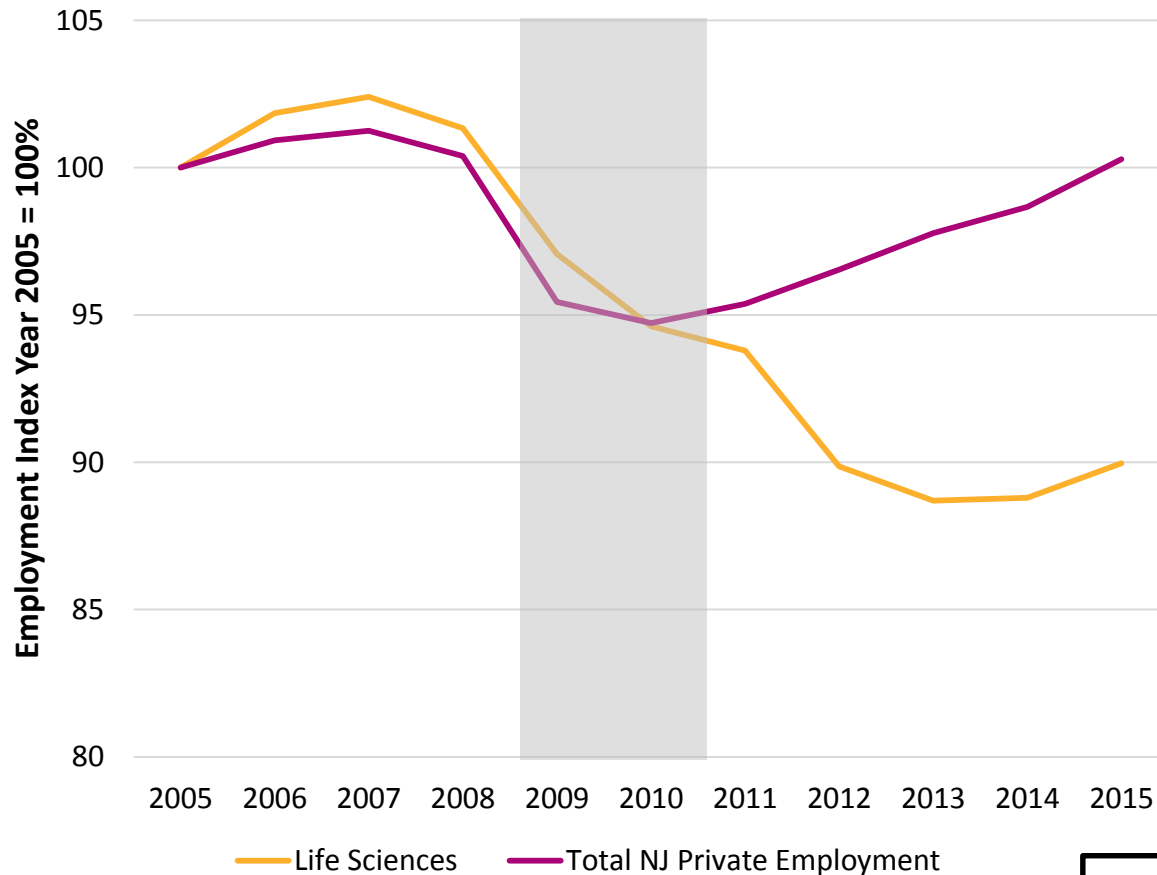


The Life Sciences Cluster has an enormous impact on providing high quality jobs and adding significant value to the State's economic activities. Recent New Jersey highlights included:

- **Employment Total:** averaged 116,700 or 3.5 percent of all private sector workers in the state for 2015. Nationally, the proportion was just 1.9 percent.
- **Well-paying Jobs:** Paid over \$16.9 billion in 2015 annual payrolls; 8.2 percent of the state's total wages.
- **Establishments total:** over 3,100 in 2015. Over a ten year period (2010-2015) – even with numerous industry related reorganizations – New Jersey's drug & pharmaceutical component still grew (by +8.2%).



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER ALL PRIVATE SECTOR VS. INDUSTRY CLUSTER EMPLOYMENT



- After increasing slightly from 2005 to 2007 (+2.4%), the NJ life sciences industry experienced a steady decline from 2007 to 2013 (-13.7%), flattened out from 2013 to 2014 (+0.1%), increased from 2014 to 2015 (+1.2%), and is currently below the 2005 employment level (-10.0%).
- Total statewide private sector employment has led life sciences employment from 2010 to 2015 and is currently above the 2005 employment level by 0.3 percent.

Gray area denotes U.S. economic recession as defined by the National Bureau of Economic Research (NBER)



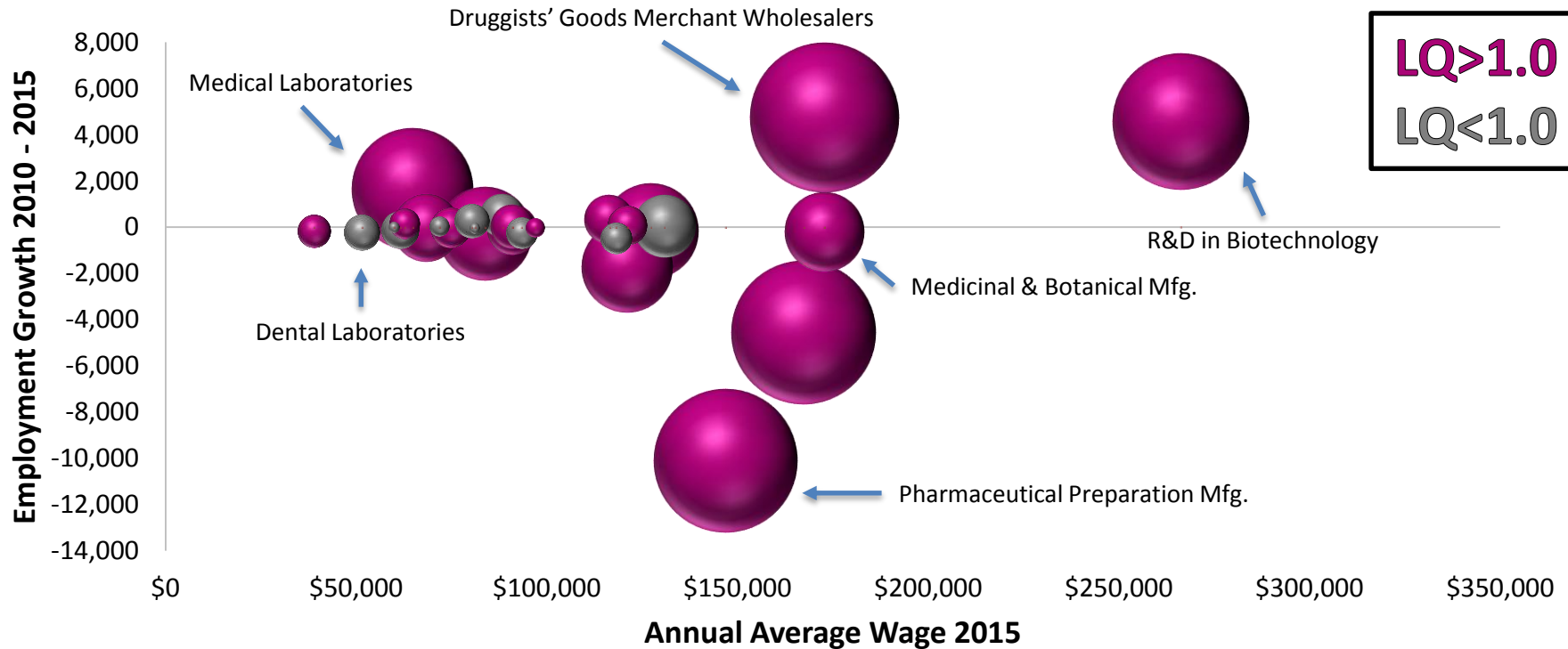
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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2005 - 2015 Annual Averages

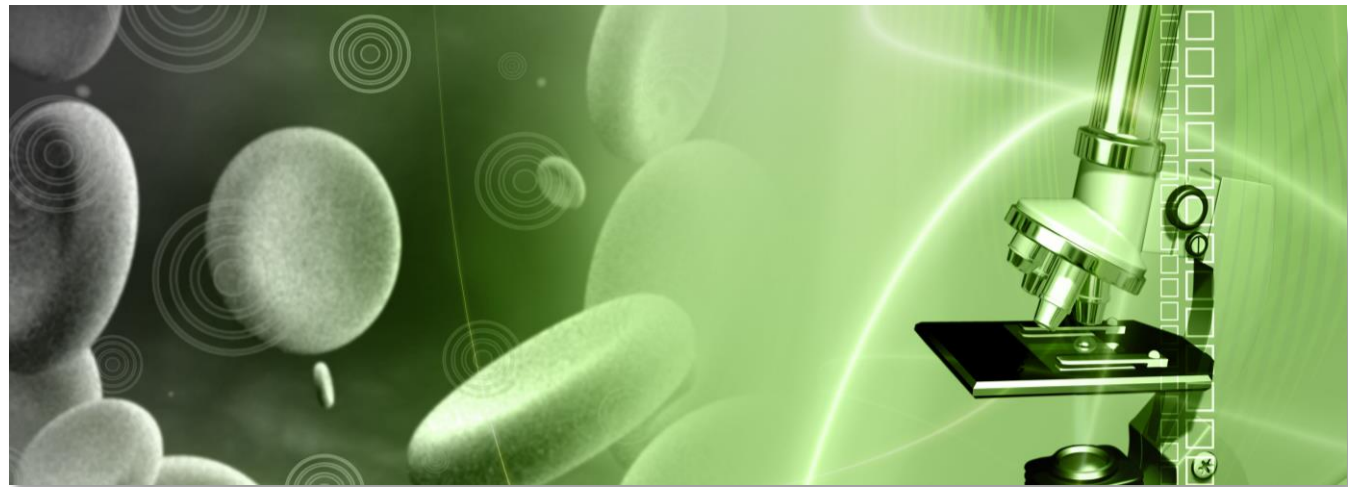
NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER EMPLOYMENT SIZE, GROWTH, SALARY & LOCATION QUOTIENT



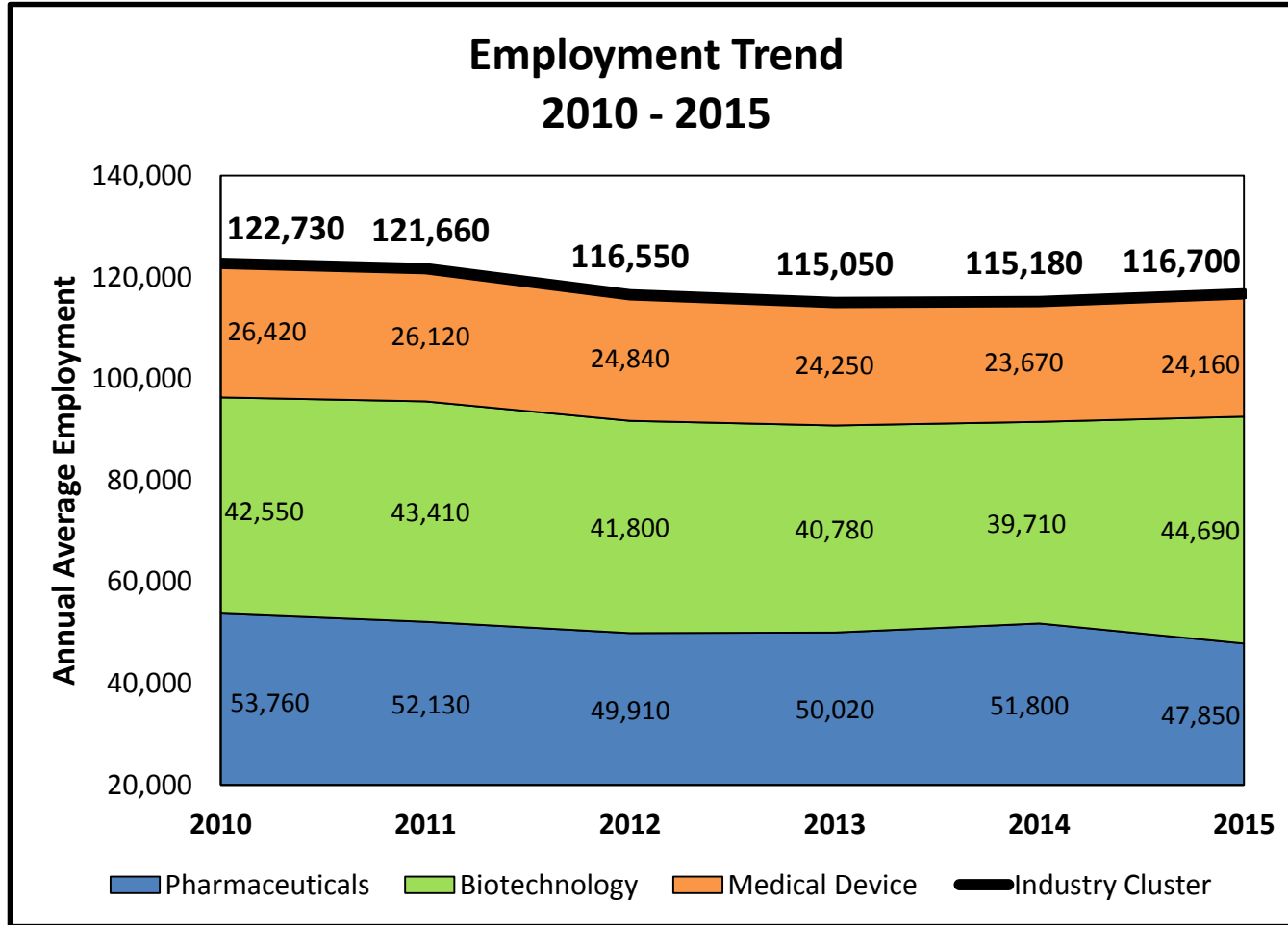
The above bubble graph has four elements:

1. Total 2015 employment - represented by the size of the bubble.
2. 2010-2015 employment growth - shown on the Y-axis, or vertical position.
3. 2015 annual average wages - shown on the X-axis, or horizontal position.
4. Location quotient - indicated by the color of the bubble. The location quotient compares the concentration of the industry subsectors in the state to those of the nation. Industries with a location quotient **above 1** are known as “basic industries” which (in theory) export a good or service from the state and in return, bring in wealth.

LIFE SCIENCES INDUSTRY CLUSTER: EMPLOYMENT ANALYSIS



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER 5-YEAR EMPLOYMENT TREND



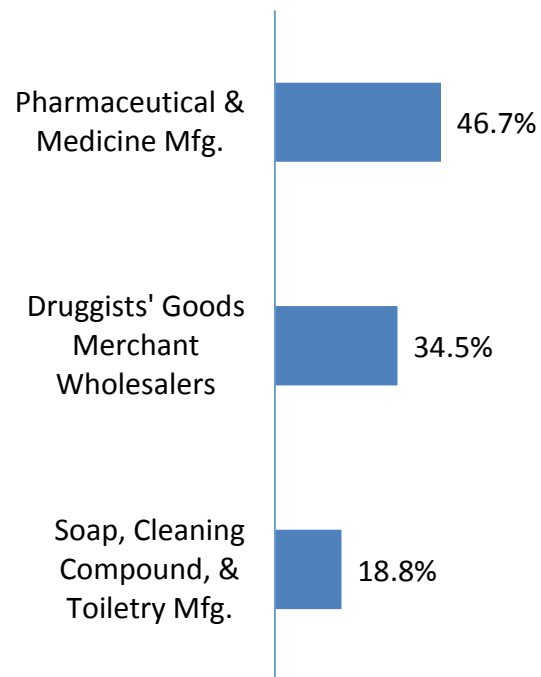
- With an average of 116,700 workers employed in this NJ cluster in 2015, the employment over the 5-year period experienced a decline of 4.9 percent.
- The pharmaceutical component experienced the largest total percent loss over the 5-year period (-11.0%).



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER SUB-SECTOR EMPLOYMENT

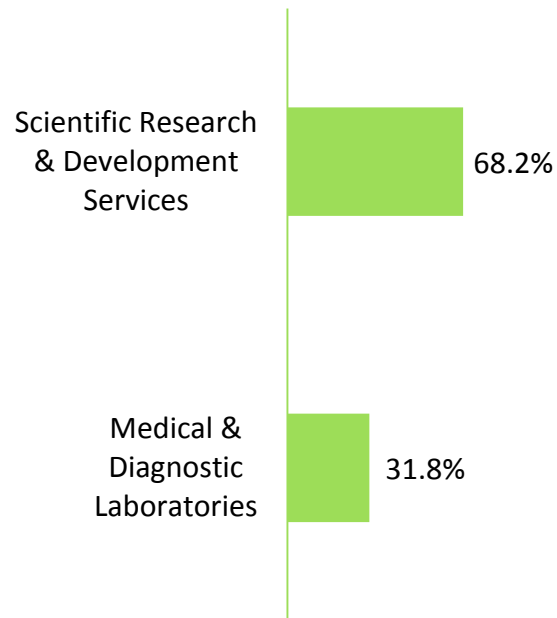
In 2015, the 116,700 jobs within this New Jersey cluster were concentrated in:

Pharmaceuticals



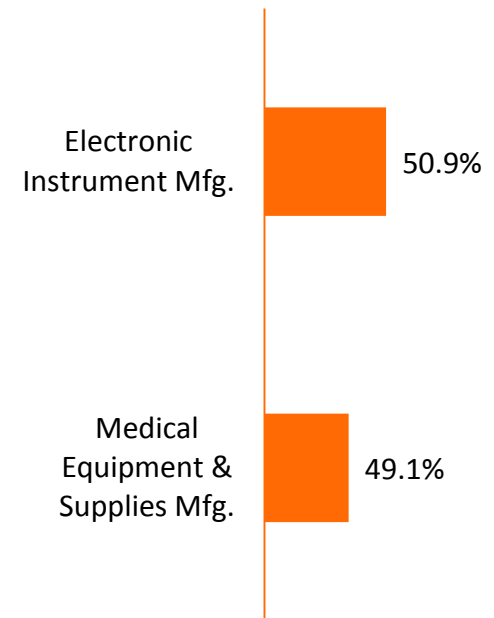
- 47,850 jobs
- The pharmaceuticals component accounted for 41.0 percent of the life sciences industry cluster employment.

Biotechnology (R&D)



- 44,690 jobs
- Scientific research and development services accounted for more than 30,400 employment.

Medical Devices



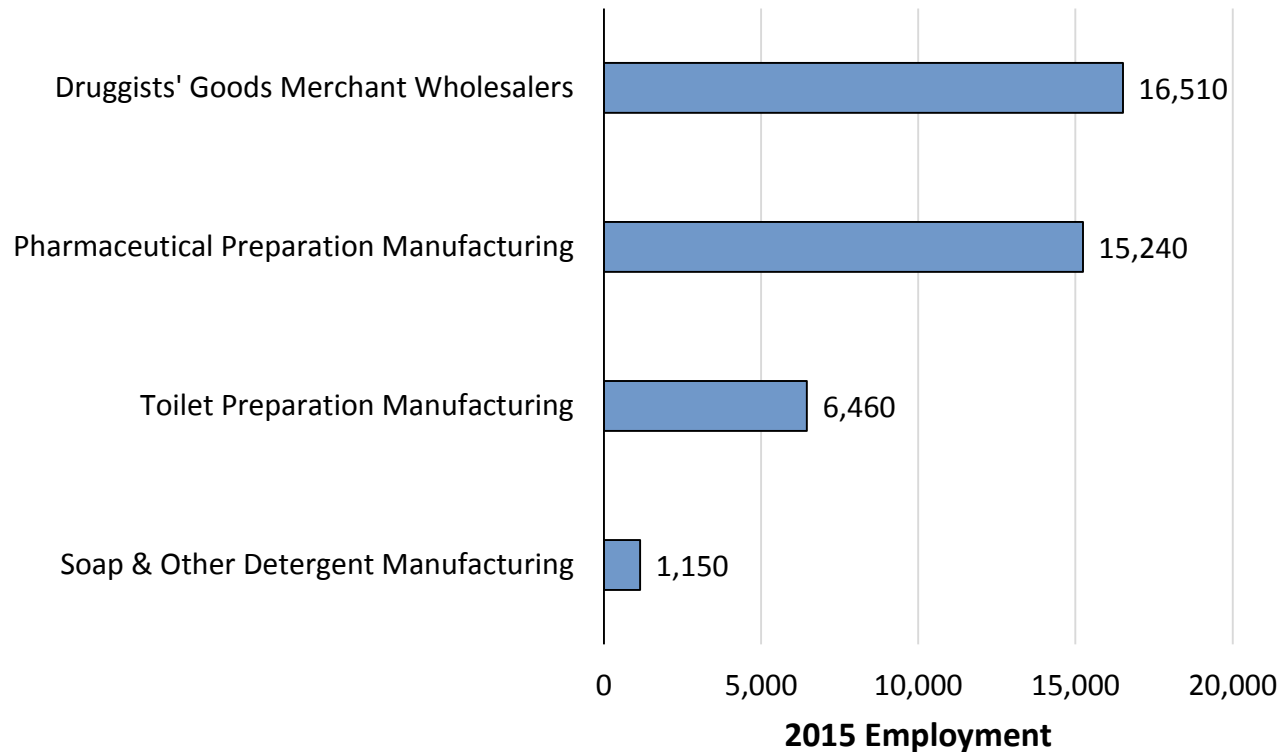
- 24,160 jobs
- Medical devices is the smallest of the three components and makes up 20.7 percent of the life sciences industry.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

PHARMACEUTICALS INDUSTRY TOP EMPLOYMENT, 2015

Pharmaceuticals Industry



Due to disclosure issues, medicinal and botanical mfg., surface active agent mfg., other biological product mfg., in-vitro diagnostic substance mfg., and polish and sanitation good manufacturing are not included in the chart above.

- Made up 41.0 percent of the life sciences industry cluster's employment in 2015.
- Pharmaceutical & medicine manufacturing (-31.8%) and soap, cleaning compound, and toiletry manufacturing (-2.5%) both experienced a decline from 2010 to 2015 while druggists' goods merchant wholesalers experienced significant growth (+40.5%).



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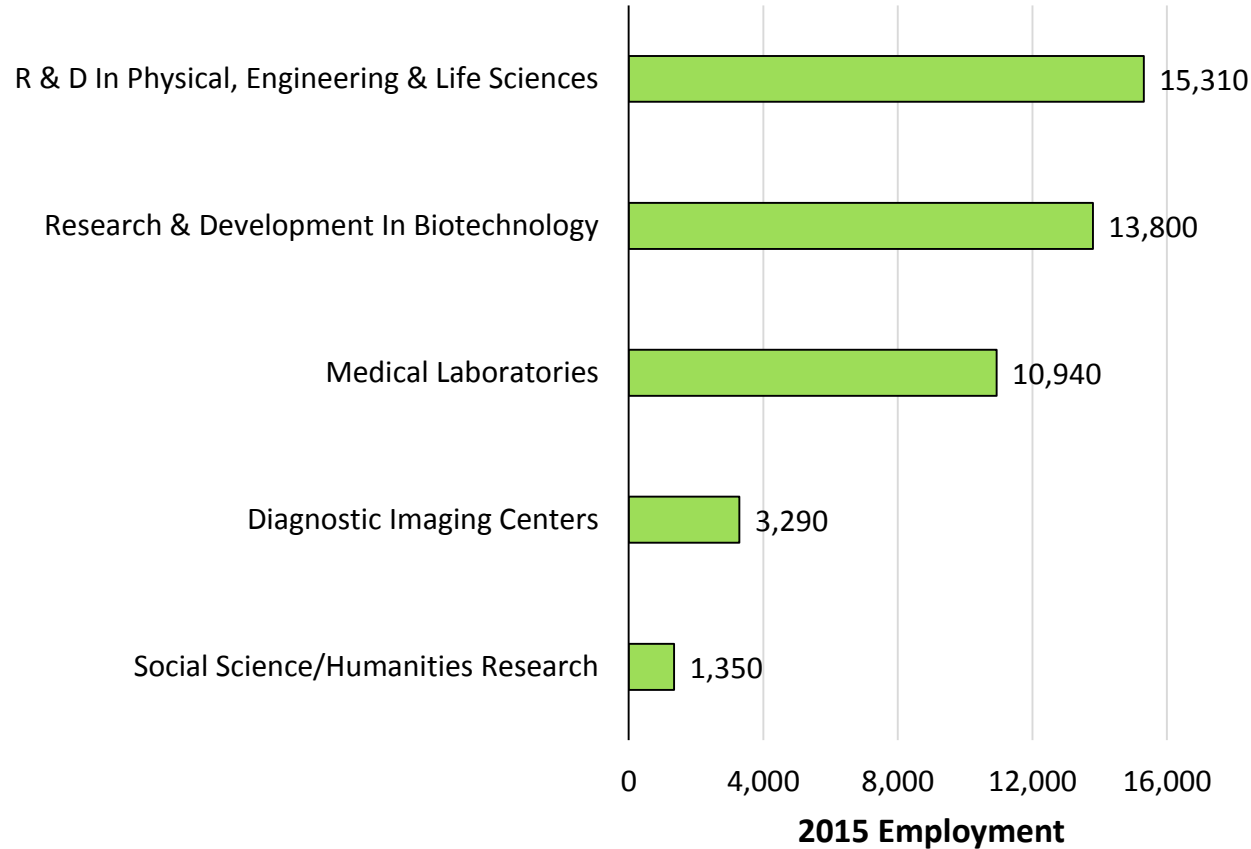


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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER BIOTECHNOLOGY INDUSTRY TOP EMPLOYMENT, 2015

Biotechnology



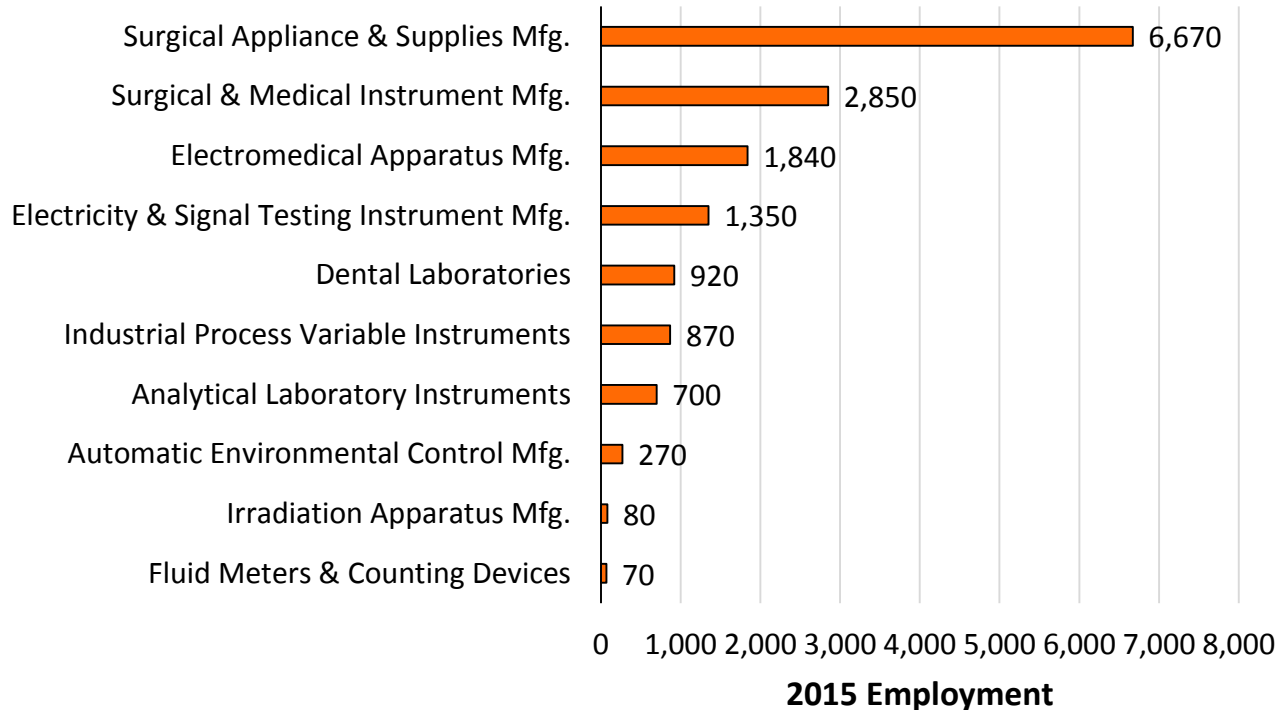
- Accounted for 38.3 percent of life sciences industry cluster's employment in 2015.
- Scientific R&D industry service sectors grew (+1.7%) over the 5-year period from 2010 to 2015.
- Medical and diagnostic laboratories experienced significant growth over the same period (+12.9%).



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

MEDICAL DEVICES INDUSTRY TOP EMPLOYMENT, 2015

Medical Devices



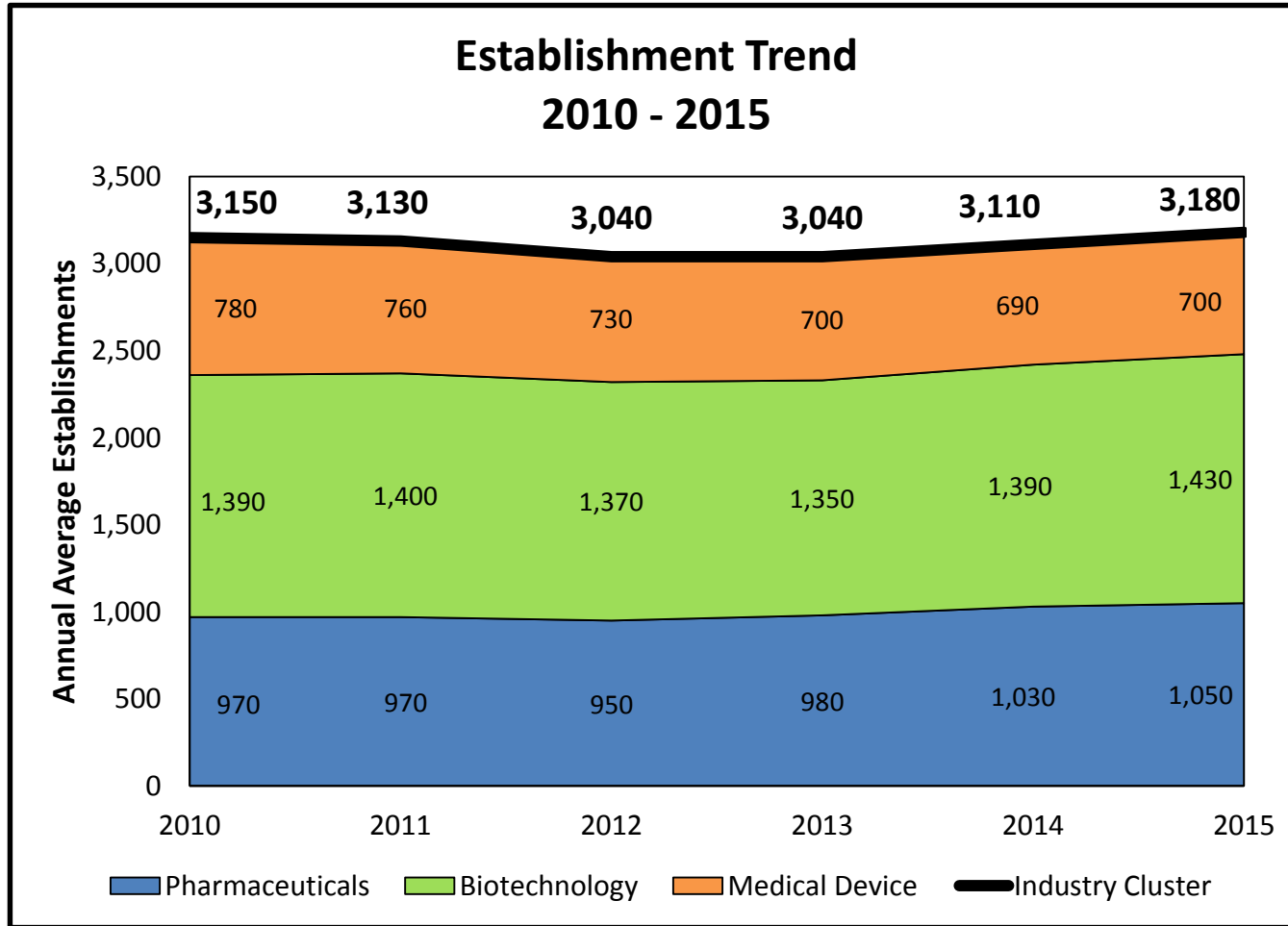
Due to disclosure issues, search, detection & navigation instruments, other measuring & controlling devices, dental equipment & supplies mfg., and ophthalmic goods mfg. are not included in the chart above.

- Accounted for 20.7 percent of the life sciences industry cluster's employment in 2015.
- Electronic instrument manufacturing (-13.5%) and medical equipment & supplies manufacturing (-2.8%) both experienced employment loss from 2010 to 2015.

LIFE SCIENCES INDUSTRY CLUSTER: ESTABLISHMENT ANALYSIS



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER 5-YEAR ESTABLISHMENT TREND



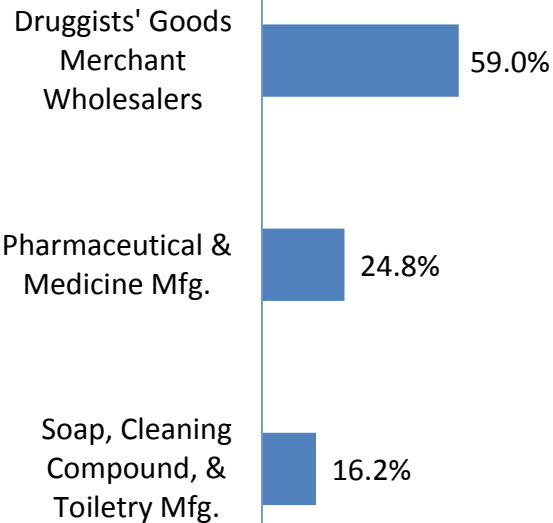
- Establishments in this cluster totaled 3,180 in 2015 after experiencing a slight growth (1.0%) from 2010 – 2015.
- Pharmaceuticals has seen an upward trend from 2010 to 2015, adding an additional 80 establishments.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER SUB-SECTOR ESTABLISHMENTS

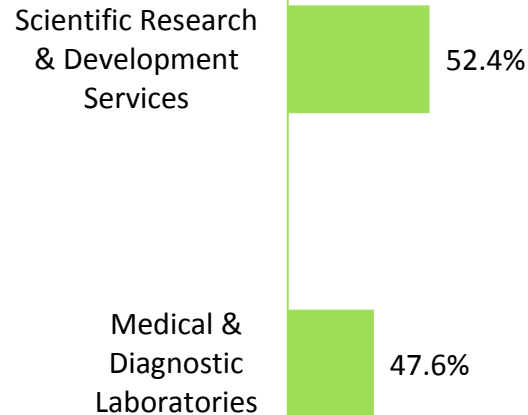
In 2015, New Jersey had 3,180 establishments in this cluster engaged in:

Pharmaceuticals



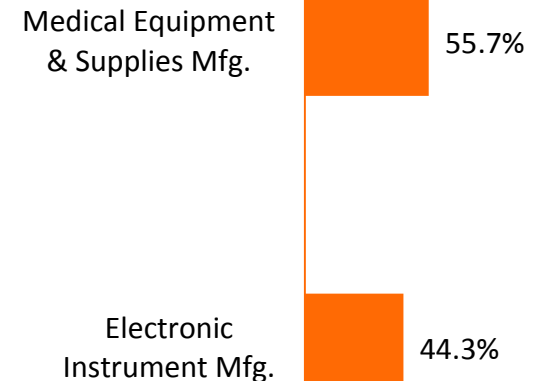
- 1,050 establishments
- The pharmaceutical component accounts for 1/3 of all life sciences industry establishments.

Biotechnology (R&D)



- 1,430 establishments
- R&D related sub-sectors accounted for 45.0% of all life sciences establishments.

Medical Devices



- 700 establishments
- The medical devices component has the least establishments of all three life sciences industry components.



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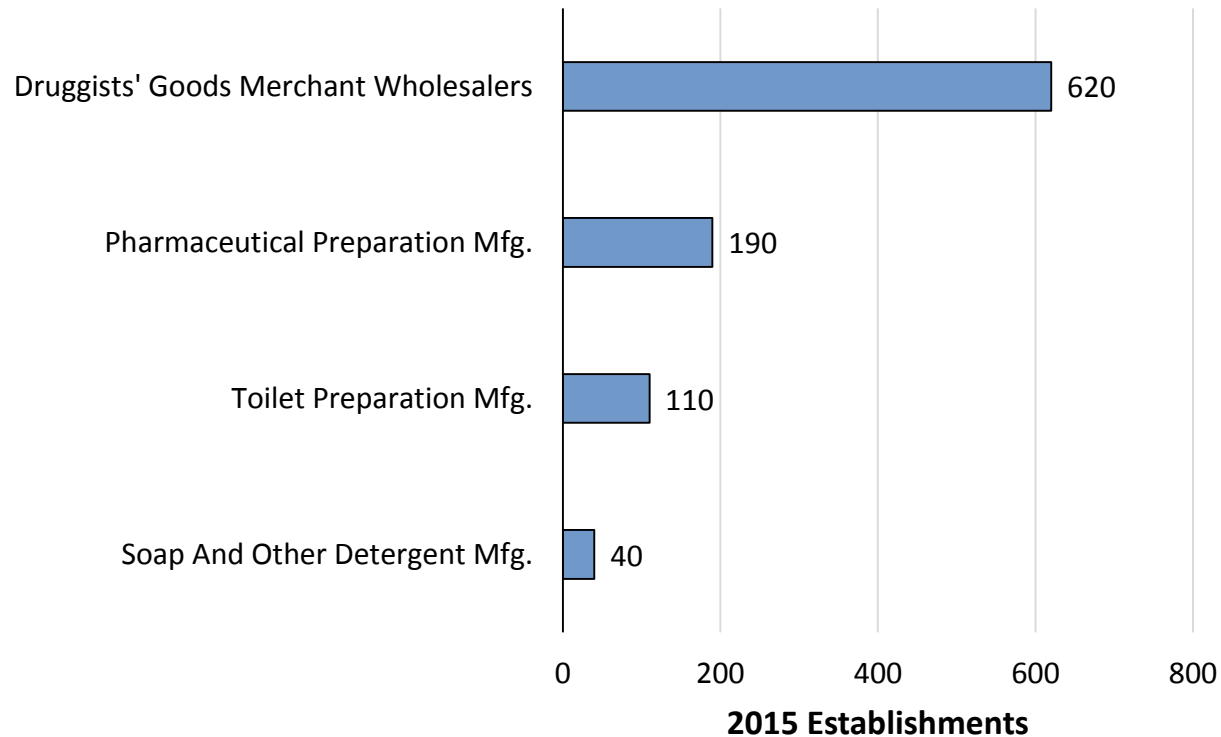
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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

PHARMACEUTICALS INDUSTRY TOP ESTABLISHMENTS, 2015

Pharmaceuticals Industry



Due to disclosure issues, medicinal and botanical mfg., surface active agent mfg., other biological product mfg., in-vitro diagnostic substance mfg., and polish and sanitation good manufacturing are not included in the chart above.

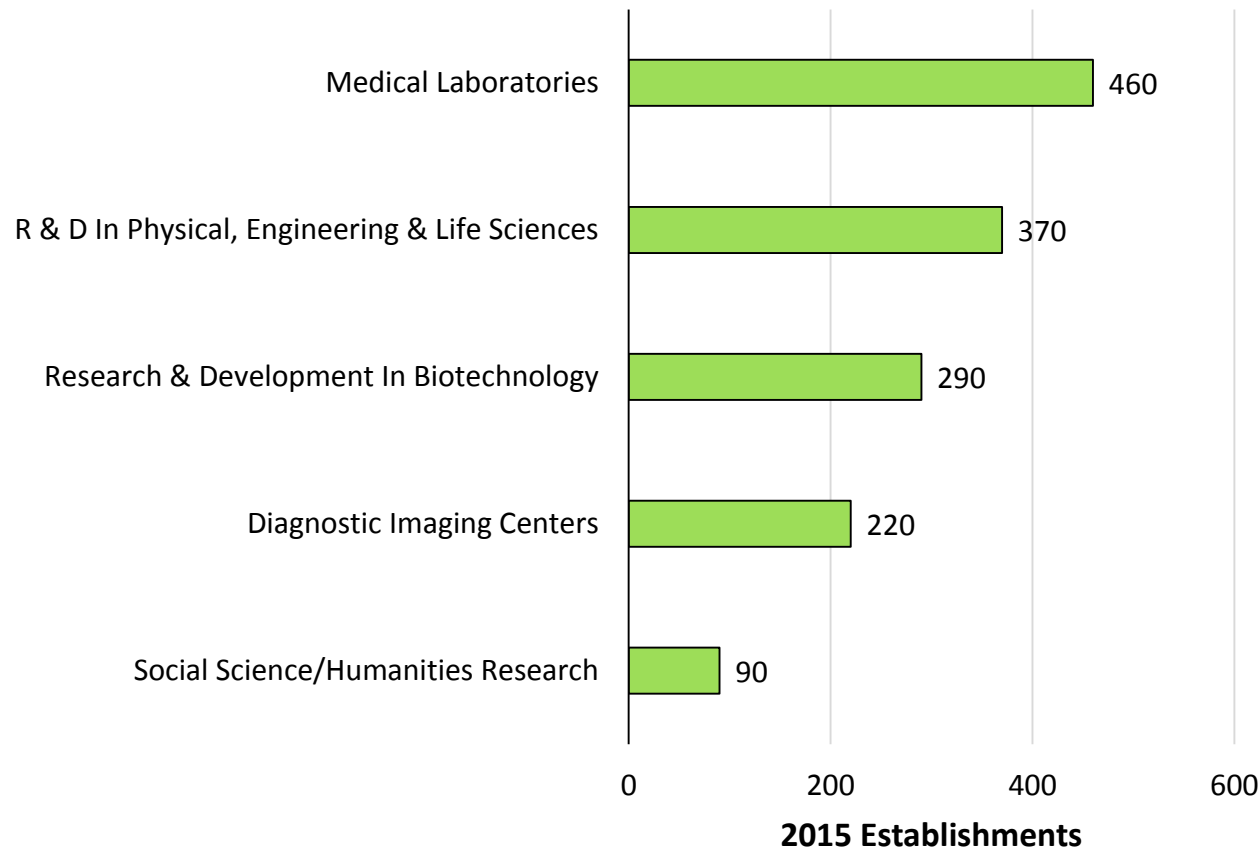
- Accounted for 33.0 percent of the life sciences industry cluster's establishments in 2015.
- Establishments in the soap, cleaning compound, and toiletry manufacturing industries (-19.0%) declined from 2010 to 2015, while pharmaceutical & medicine manufacturing (+4.0%) and druggists' goods merchant wholesalers (+21.6%) realized growth.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

BIOTECHNOLOGY INDUSTRY TOP ESTABLISHMENTS, 2015

Biotechnology (R&D)



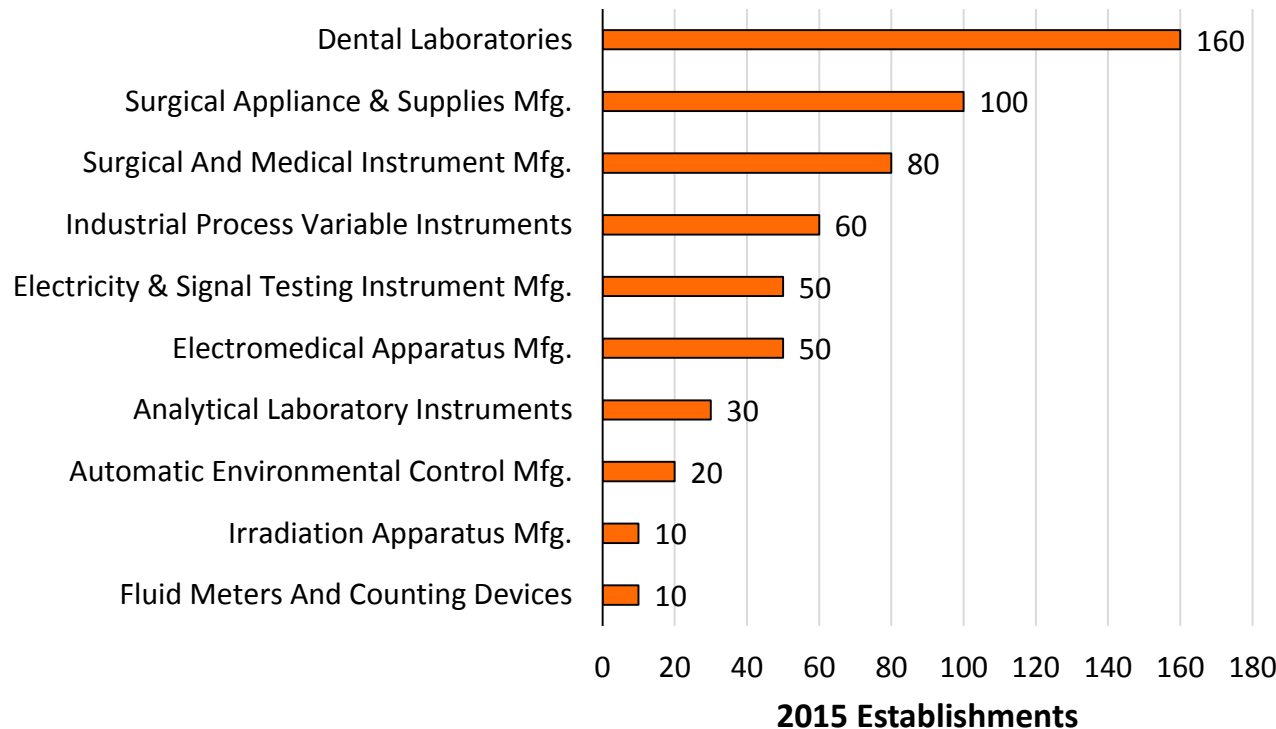
- Made up 45.0 percent of all establishments in the life sciences industry cluster in 2015 with 1,430 establishments.
- Scientific R&D industry service sectors (+4.2%) and medical diagnostic laboratories (+1.5%) both experienced growth from 2010 to 2015.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

MEDICAL DEVICES INDUSTRY TOP ESTABLISHMENTS, 2015

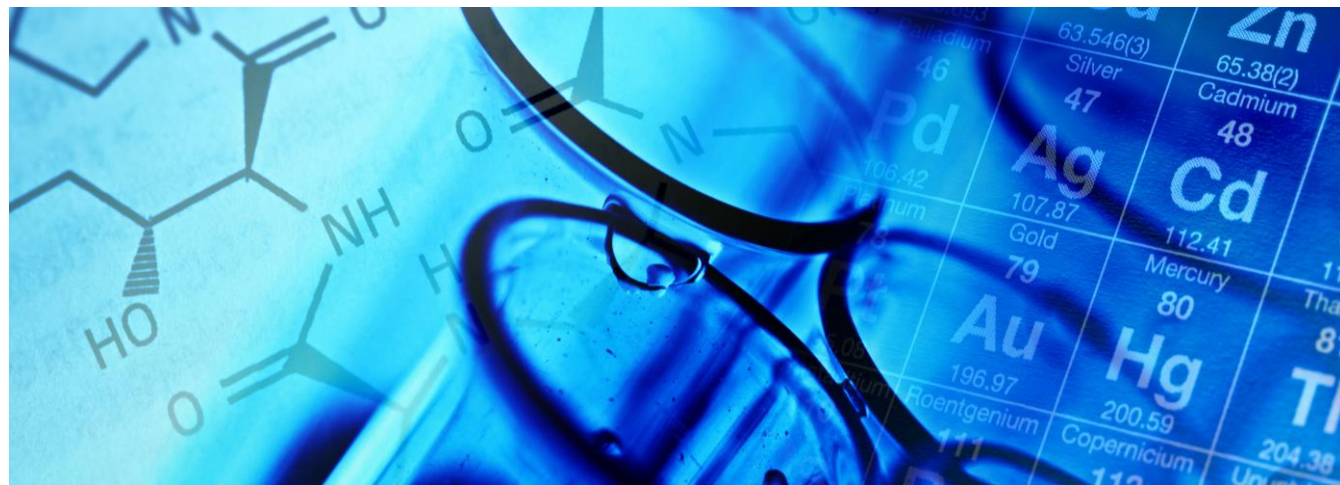
Medical Devices



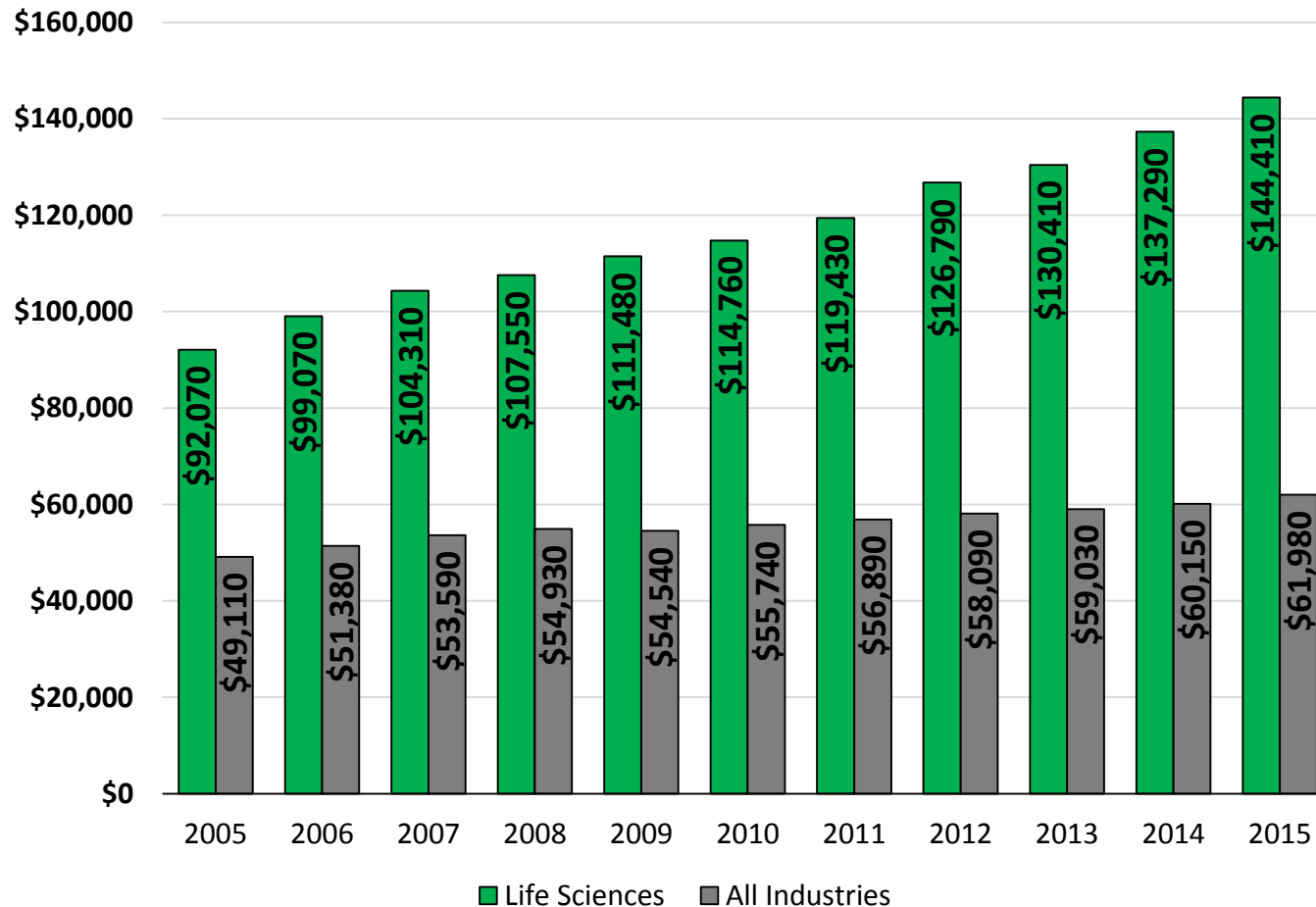
Due to disclosure issues, search, detection & navigation instruments, other measuring & controlling devices, dental equipment & supplies mfg., and ophthalmic goods mfg. are not included in the chart above.

- Represented 22.0 percent of the life sciences industry cluster's establishments in 2015 (700).
- Electronic instrument manufacturing (-6.1%) and medical equipment and supplies manufacturing (-13.3%) both declined from 2010 to 2015.

LIFE SCIENCES INDUSTRY CLUSTER: ANNUAL AVERAGE WAGE ANALYSIS



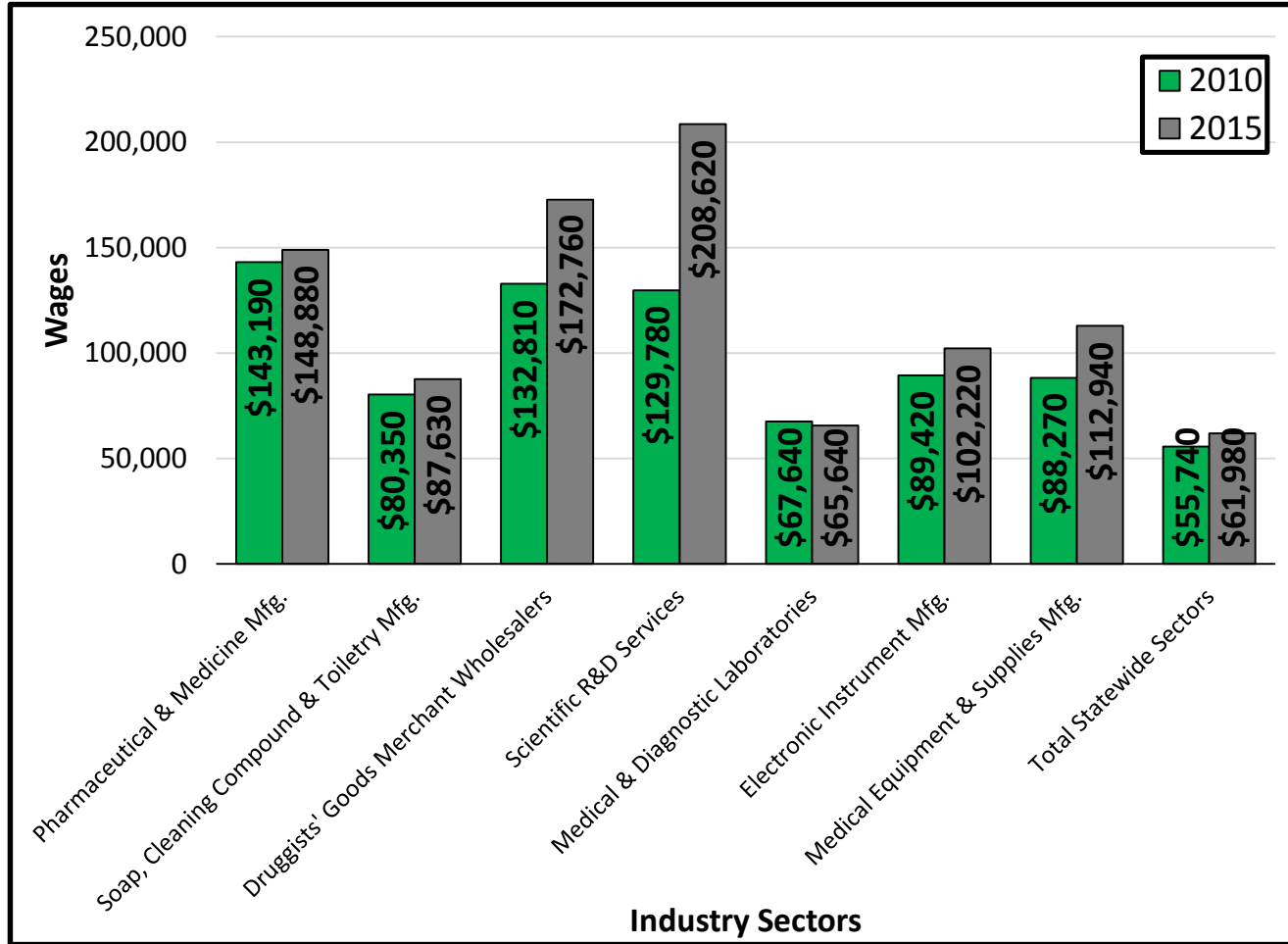
NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER ALL PRIVATE SECTOR VS. LIFE SCIENCES ANNUAL AVERAGE WAGE



- Wages in the life sciences cluster have averaged 209.2% of the statewide annual average wage since 2005.
- Annual average wages for the cluster have risen +56.9% over the ten year period from 2005 to 2015.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER 5-YEAR AVERAGE ANNUAL WAGES TREND



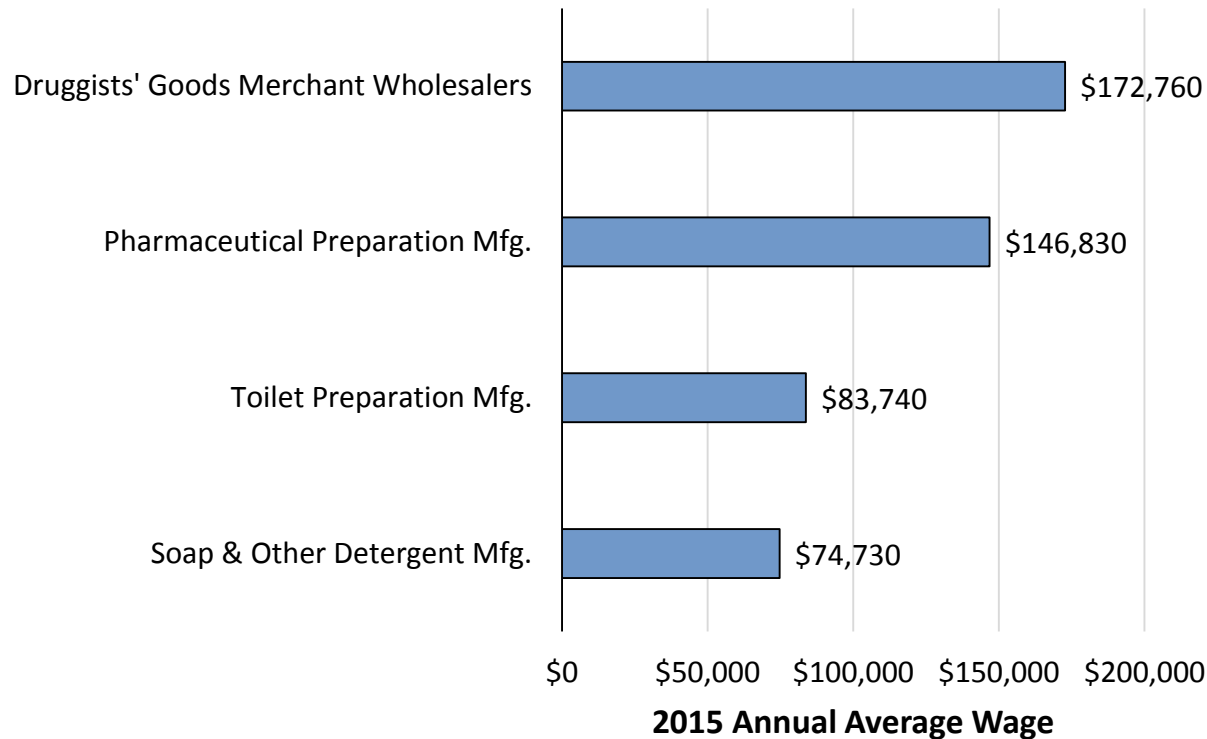
- This cluster's average annual wage was \$144,410 in 2015, which was 133.0 percent higher than the state's total private sector's average annual wage of \$61,980.
- All three of this cluster's components had 2015 wages that were significantly higher than the state's total average annual wage.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

PHARMACEUTICALS INDUSTRY TOP ANNUAL AVERAGE WAGE, 2015

Pharmaceuticals Industry



Due to disclosure issues, medicinal and botanical mfg., surface active agent mfg., other biological product mfg., in-vitro diagnostic substance mfg., and polish and sanitation good manufacturing are not included in the chart above.

- Annual average wages increased \$15,460 (or +11.9%), from \$130,160 in 2010 to \$145,620 in 2015.
- Increases in the industry sectors ranged from pharmaceutical and medicine manufacturing (+4.0%) to druggists' goods merchants wholesalers (+30.1%) in annual average wages from 2010 to 2015.



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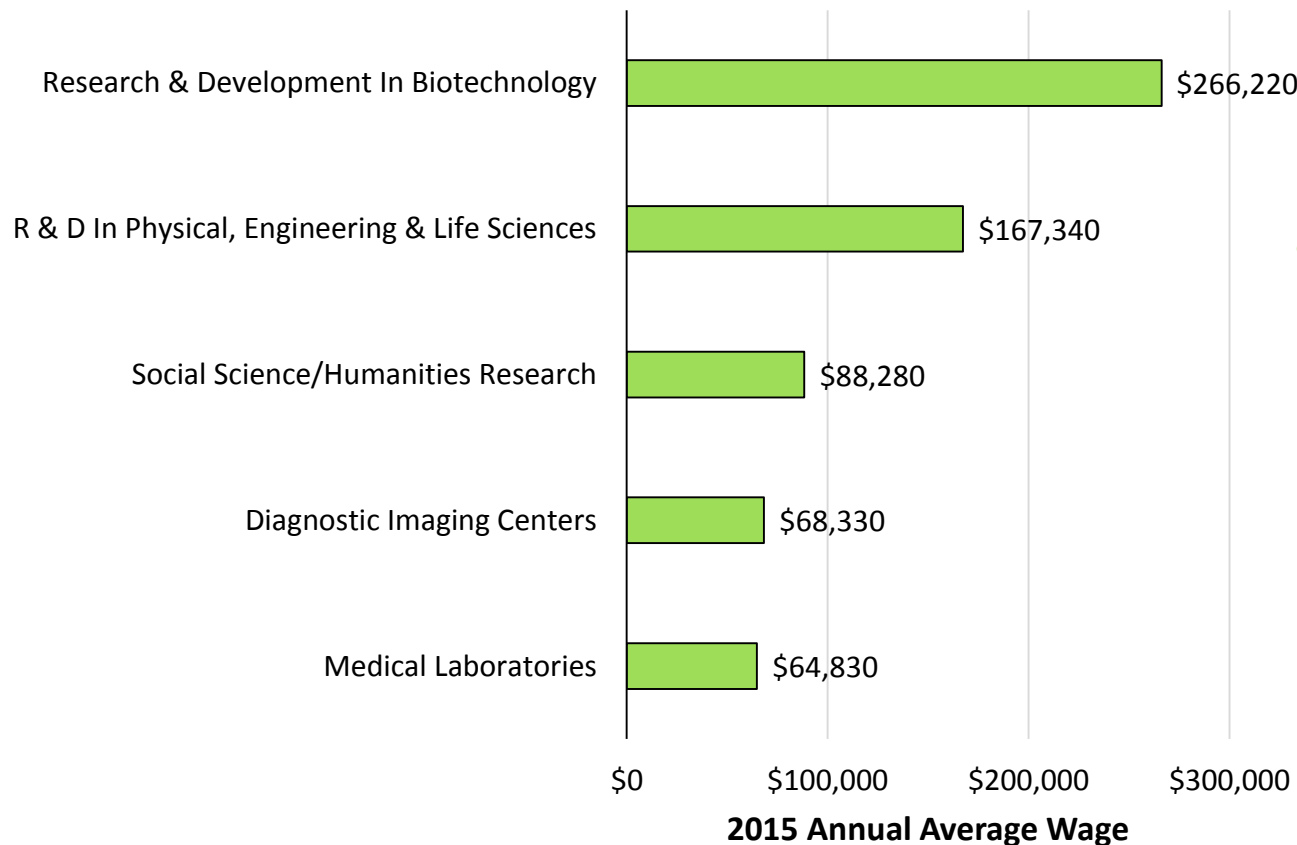
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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2010 - 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

BIOTECHNOLOGY INDUSTRY TOP ANNUAL AVERAGE WAGE, 2015

Biotechnology (R&D)

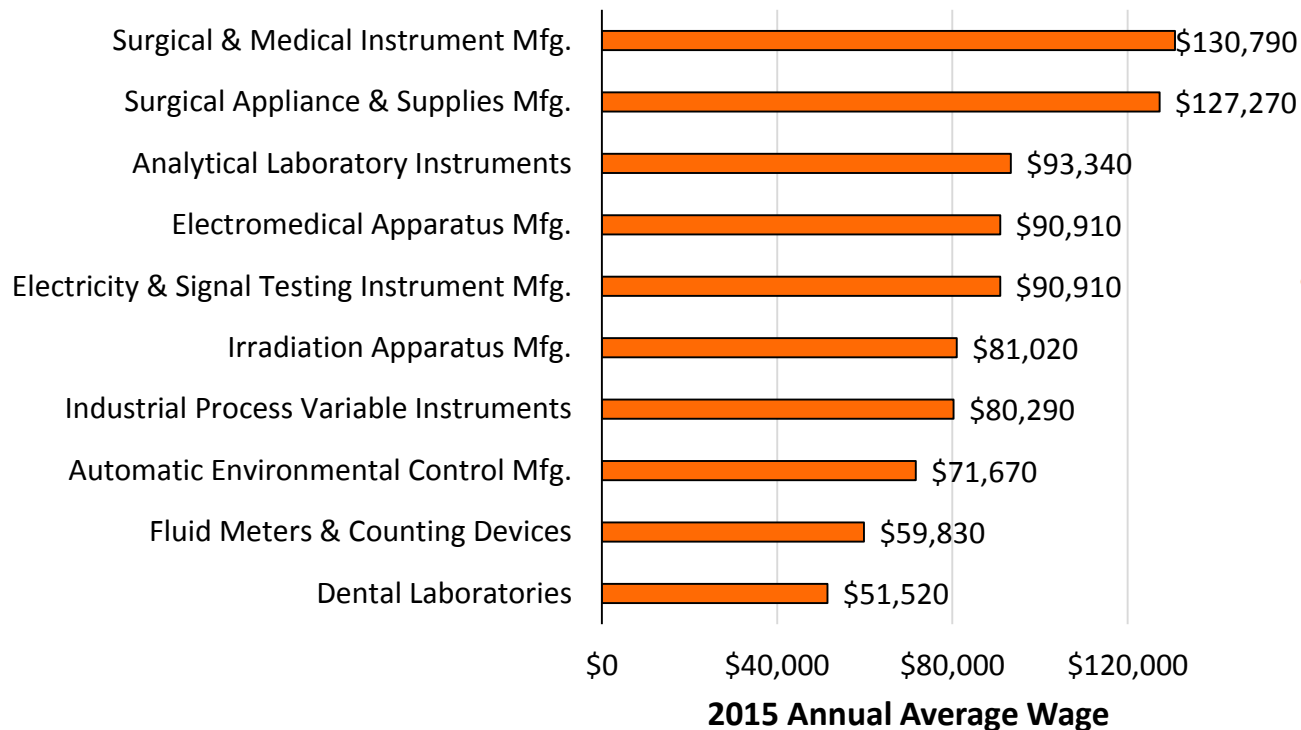


- Annual average wages were \$163,090 in 2015, up +46.4 percent from \$111,380 in 2010.
- The industry sectors experienced mixed results: from medical & diagnostic laboratories, which declined (-3.0%), to scientific R&D services which realized an increase (+60.7%) over the same 5-year period.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

MEDICAL DEVICES INDUSTRY TOP ANNUAL AVERAGE WAGE, 2015

Medical Devices



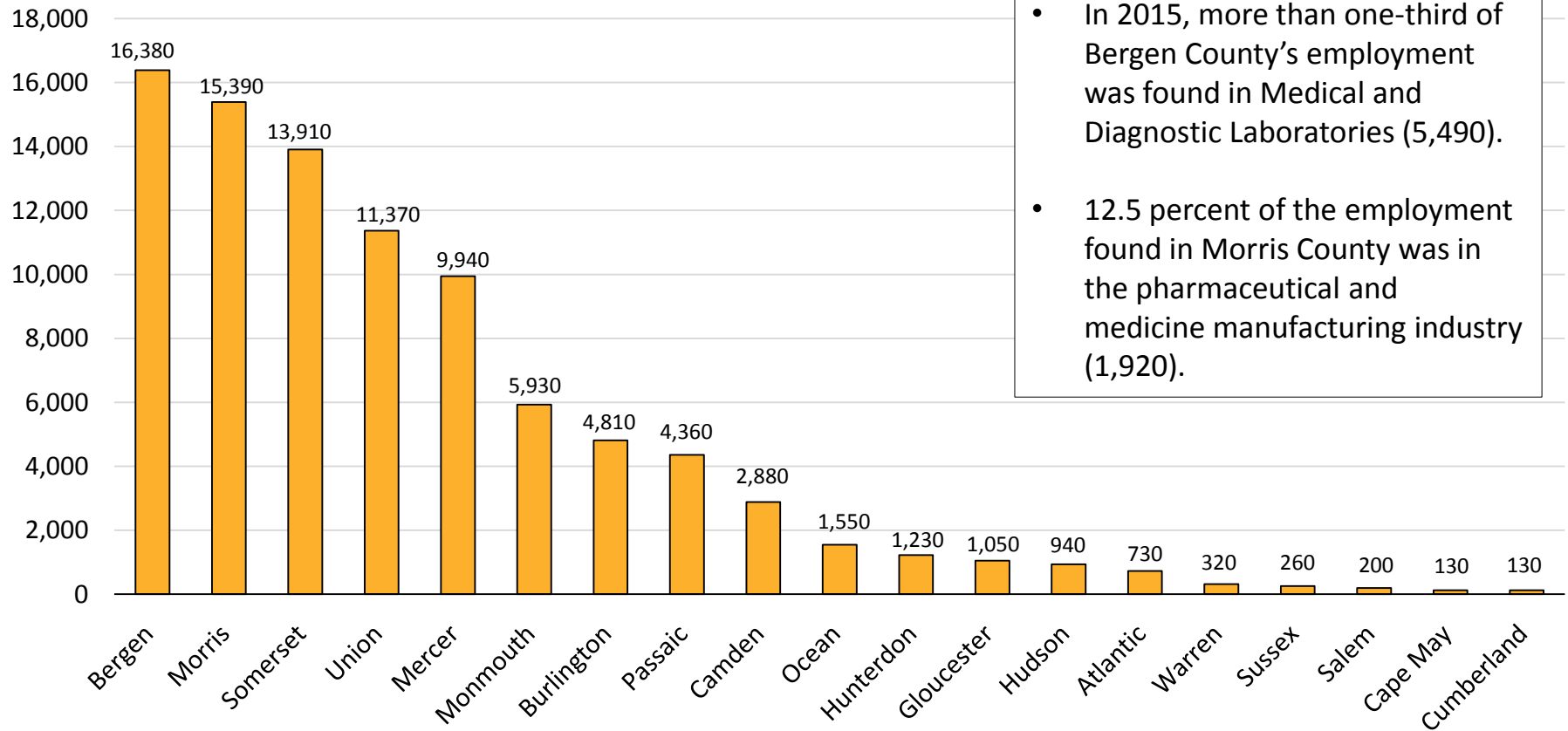
Due to disclosure issues, search, detection & navigation instruments, other measuring & controlling devices, dental equipment & supplies mfg., and ophthalmic goods mfg. are not included in the chart above.

- Annual average wages were \$107,480 in 2015, up +20.9% from \$88,890 in 2010.
- Growth for the industry sectors ranged from +14.3% (electronic instrument manufacturing) to +28.0% (medical equipment and supplies manufacturing) over the 5-year period.

LIFE SCIENCES INDUSTRY CLUSTER: REGIONAL AND COUNTY ANALYSIS



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER EMPLOYMENT BY COUNTY, 2015 ANNUAL AVERAGES



- In 2015, more than one-third of Bergen County's employment was found in Medical and Diagnostic Laboratories (5,490).
- 12.5 percent of the employment found in Morris County was in the pharmaceutical and medicine manufacturing industry (1,920).

Due to disclosure issues, Essex and Middlesex Counties are not included in the chart above.



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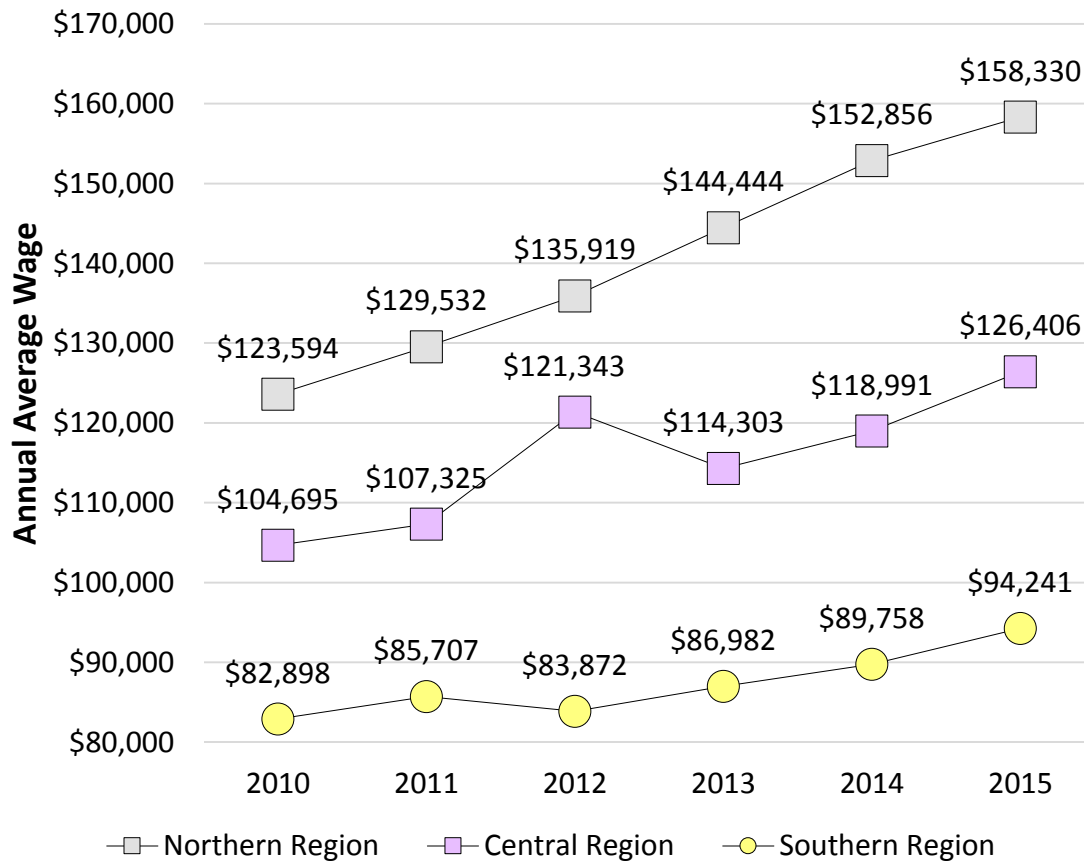


Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

LIFE SCIENCES ANNUAL AVERAGE WAGE BY REGION 5-YEAR TREND

Life Sciences Annual Average Wage Trend

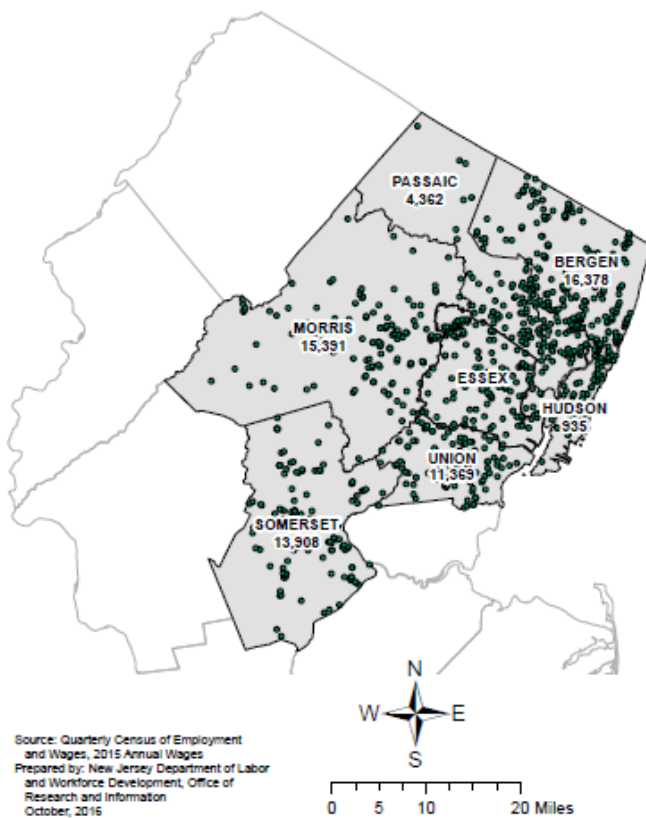


- Northern Region - (Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union, and Warren Counties) – Annual average wage increased 28.1 percent from 2010 - 2015.
- Central Region – (Mercer, Middlesex, Monmouth, and Ocean Counties) – Annual average wage experienced a 20.7 percent growth over the five-year period.
- Southern Region – (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties) –Smallest annual average wage increase over the period amongst the regions (+13.7%).



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER COUNTIES IN THE NORTHERN REGION

*Life Sciences Employment and Establishment Locations
Northern Region of New Jersey, 2015*



Due to disclosure issues, Essex County life sciences employment is not included in the map to the left.

The highlighted region to the left consists of Essex, Passaic, Morris, Somerset, Union, Hudson, and Bergen Counties.

- **Establishments** – A majority of the Life Science industry related establishments can be found along major highways in NJ within a close proximity to New York, NY.
- **Employment** – Represent more than half of the life sciences employment in New Jersey in 2015.
- **Average Wage** – The average wage for these counties in life sciences related industries is above the NJ average for life sciences industry employment (\$158,330 vs. \$144,410).



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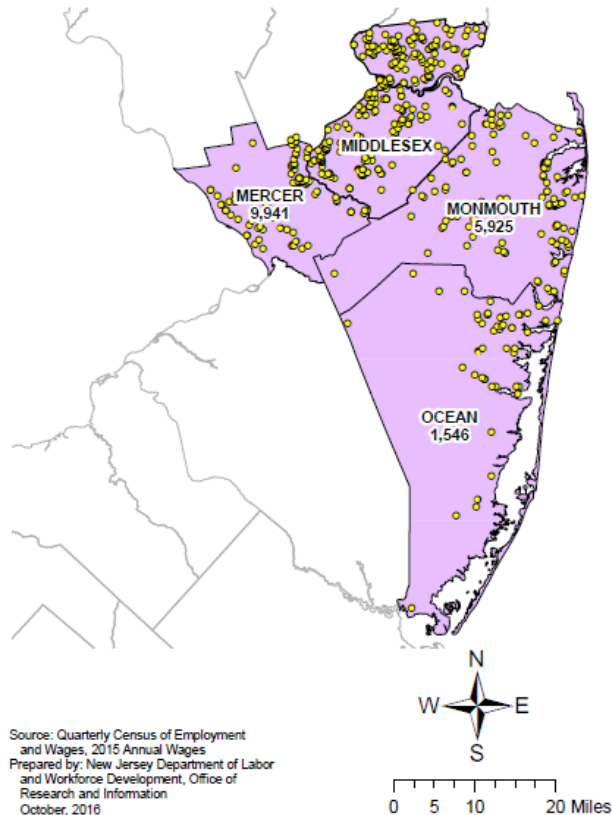
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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

CENTRAL NEW JERSEY ESTABLISHMENTS

Life Sciences Employment and Establishment Locations
Central Region of New Jersey, 2015



Due to disclosure issues, Middlesex County life sciences employment is not included in the map to the left.

The highlighted region to the left consists of Mercer, Middlesex, Monmouth, and Ocean Counties.

- **Establishments** - These counties account for more than a quarter of all establishments in the life sciences industry cluster in New Jersey.
- **Employment** – Employment for these five counties makes up nearly one third of employment in the life sciences industry cluster.
- **Average Wage** – The average wage for these counties in life sciences related industries is below the NJ average for life sciences industry employment (\$126,410 vs. \$144,410).



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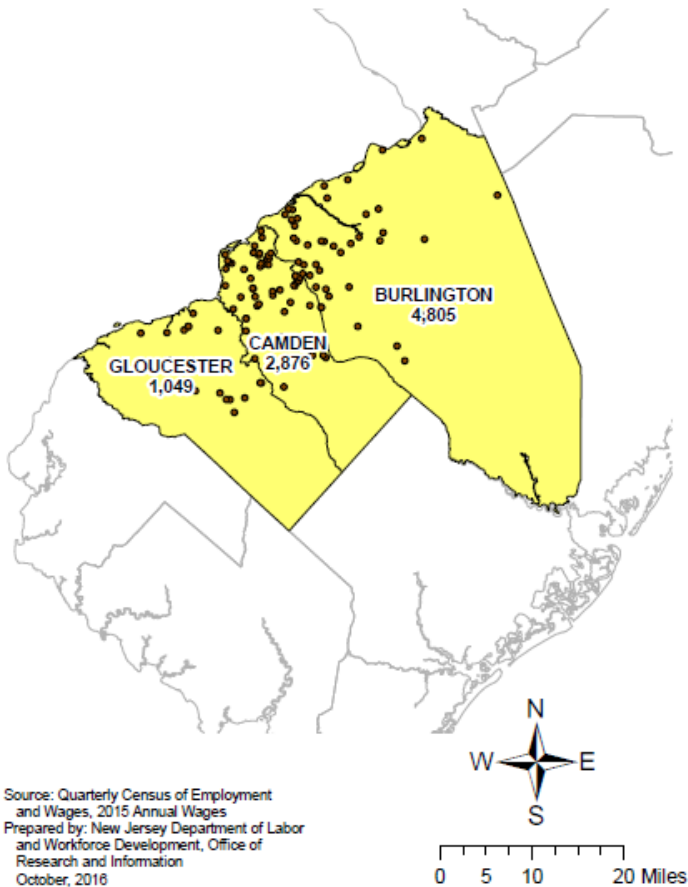
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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

SOUTHERN NEW JERSEY ESTABLISHMENTS

*Life Sciences Employment and Establishment Locations
Southern Region of New Jersey, 2015*



The highlighted region to the left consists of Burlington, Camden, and Gloucester Counties.

- **Establishments** – Having a close proximity to Philadelphia, PA these three counties account for eight percent of all life sciences industry establishments in New Jersey.
- **Employment** – The three counties have slightly more than 8,730 employment.
- **Average Wage** – The average wage for these counties in life sciences related industries is below the NJ average for life sciences industry employment (\$96,880 vs. \$144,410). These counties account for 5.0 percent of total life sciences annual average wages paid in 2015.



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Source: NJ Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2015 Annual Averages

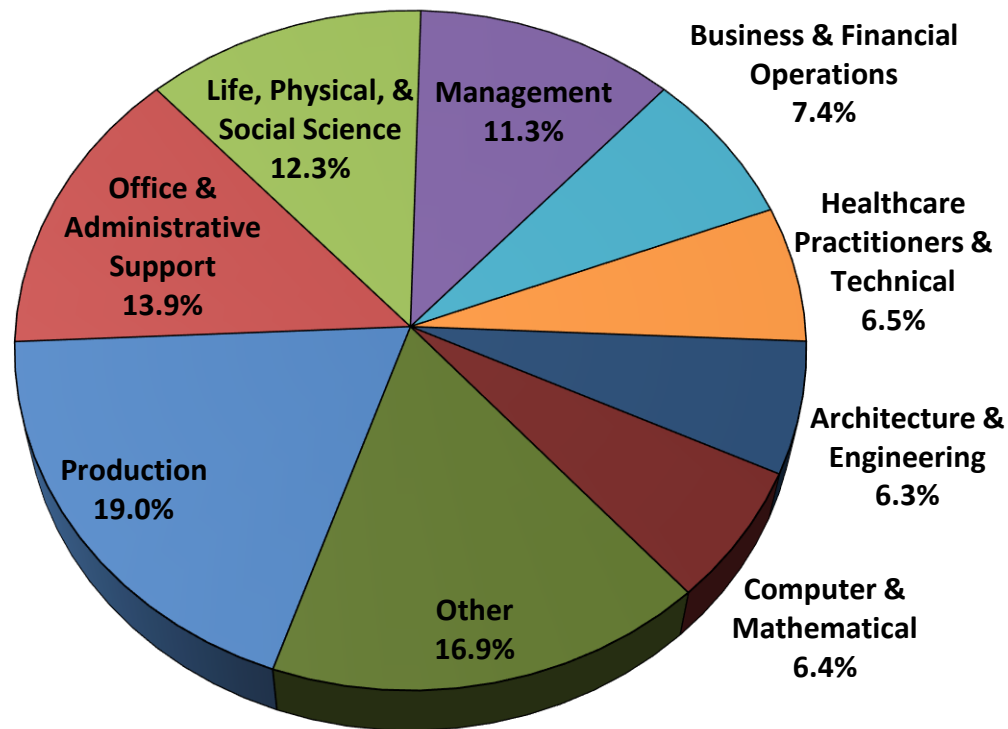
LIFE SCIENCES INDUSTRY CLUSTER: OCCUPATIONAL ANALYSIS



NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TOP OCCUPATIONAL GROUPS, 2015

Occupational Title	2015 Employment	2015 Average Salary
All Life Sciences Occupations	116,590	\$75,680
Production	21,820	\$37,480
Office & Administrative Support	15,930	\$39,240
Life, Physical, & Social Science	14,070	\$82,730
Management	13,020	\$142,470
Business & Financial Operations	8,530	\$79,990
Healthcare Practitioners & Technical	7,400	\$89,540
Computer & Mathematical	7,380	\$94,550
Architecture & Engineering	7,190	\$87,780
Sales & Related	6,250	\$43,550
Transportation & Material Moving	4,620	\$34,670
Healthcare Support	4,110	\$30,190
Installation, Maintenance, & Repair	2,650	\$51,640

Life Sciences Industry Cluster



*Note: Due to disclosure issues, of the total 116,590 jobs identified, only 98.4 percent of the estimates could be used for this occupational analysis.



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER INDUSTRY CLUSTER TOP 20 OCCUPATIONS BY EMPLOYMENT, 2015

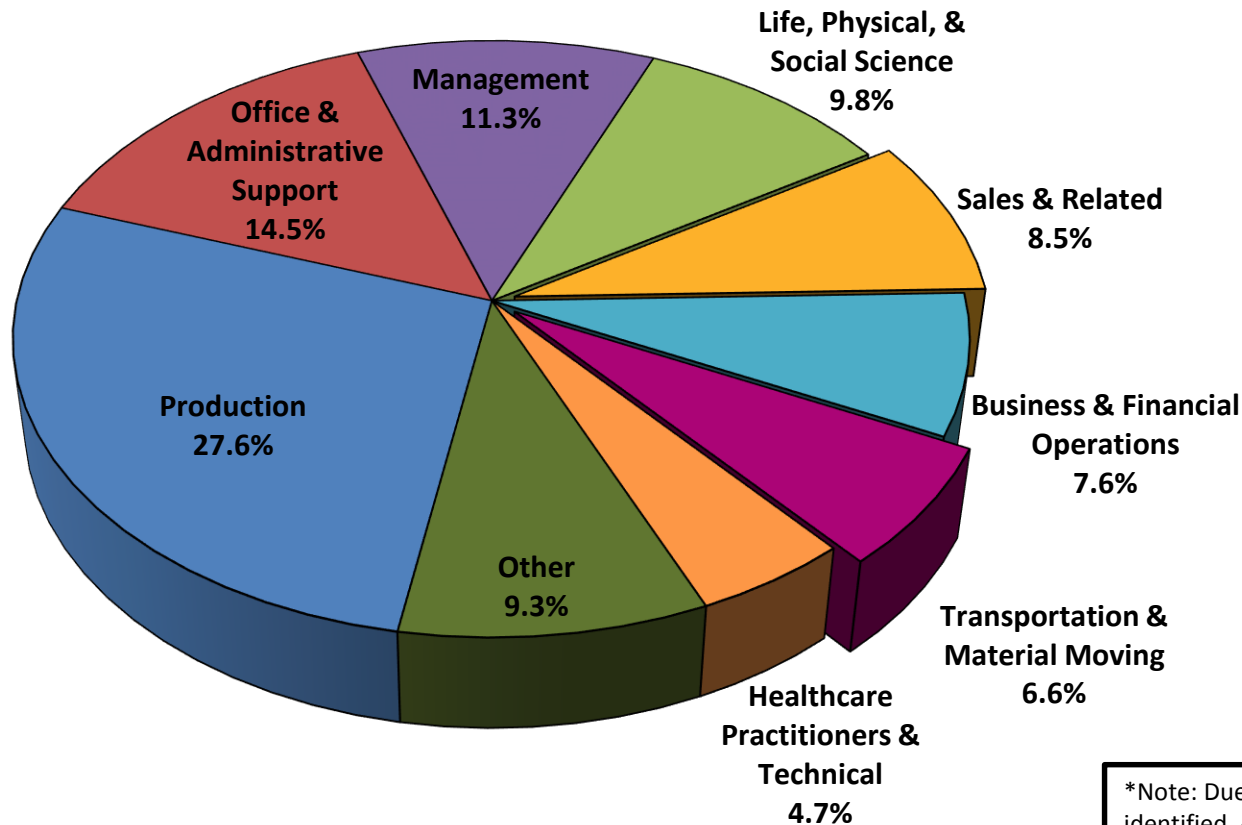
New Jersey Life Sciences Cluster's Top 20 Occupations

NAICS and Occupational Title	2015 Employment	Education
51-9111 Packaging & Filling Machine Operators & Tenders	3,900	High school diploma or equivalent
19-2031 Chemists	3,640	Bachelor's degree
43-4051 Customer Service Representatives	3,020	High school diploma or equivalent
41-4012 Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	2,430	High school diploma or equivalent
51-9061 Inspectors, Testers, Sorters, Samplers, & Weighers	2,340	High school diploma or equivalent
19-1021 Biochemists & Biophysicists	2,270	Doctoral or professional degree
19-1042 Medical Scientists, Except Epidemiologists	2,260	Doctoral or professional degree
19-4031 Chemical Technicians	2,260	Associate's degree
31-9097 Phlebotomists	2,230	Postsecondary non-degree award
15-1132 Software Developers, Applications	2,150	Bachelor's degree
29-2011 Medical & Clinical Laboratory Technologists	1,900	Bachelor's degree
11-9121 Natural Sciences Managers	1,860	Bachelor's degree
11-1021 General & Operations Managers	1,860	Bachelor's degree
51-1011 First-Line Supervisors of Production & Operating Workers	1,800	High school diploma or equivalent
53-7064 Packers & Packagers, Hand	1,630	No formal educational credential
51-9023 Mixing & Blending Machine Setters, Operators, & Tenders	1,630	High school diploma or equivalent
51-9011 Chemical Equipment Operators & Tenders	1,520	High school diploma or equivalent
43-9061 Office Clerks, General	1,480	High school diploma or equivalent
19-4021 Biological Technicians	1,380	Bachelor's degree
51-9041 Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders	1,360	High school diploma or equivalent



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER PHARMACEUTICAL COMPONENT, 2015

Major Occupational Group Breakdown



- An occupational analysis of 47,840* jobs revealed that five major occupational groups in this component accounted for nearly three-fourths (71.8%) of the employment.
- Sales and related and transportation and material occupational groups are in the top seven components for the pharmaceuticals sub sector and not for the total industry cluster.

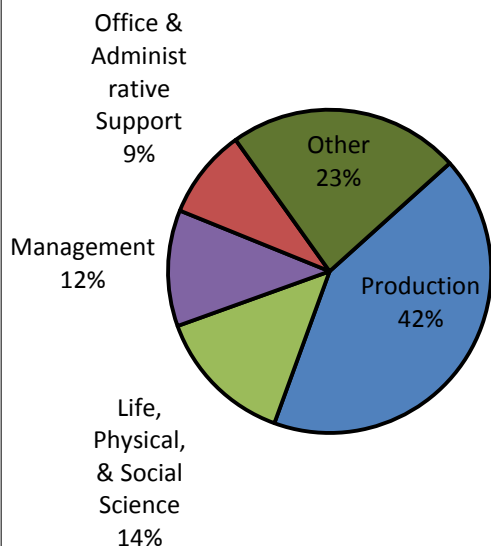
*Note: Due to disclosure issues, of the total 47,860 jobs identified, 47,840 could be used for this occupational analysis.



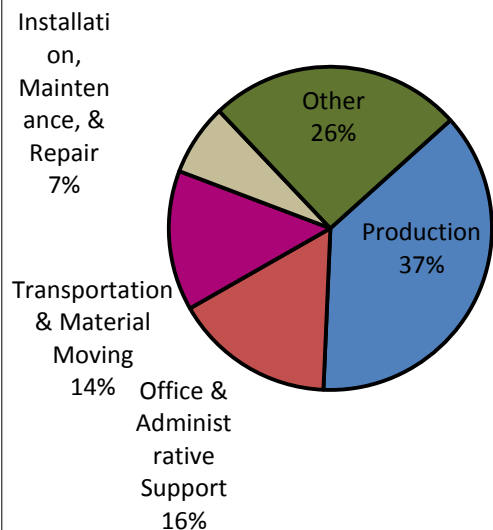
NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

PHARMACEUTICAL'S MAJOR OCCUPATIONAL GROUPS, 2015

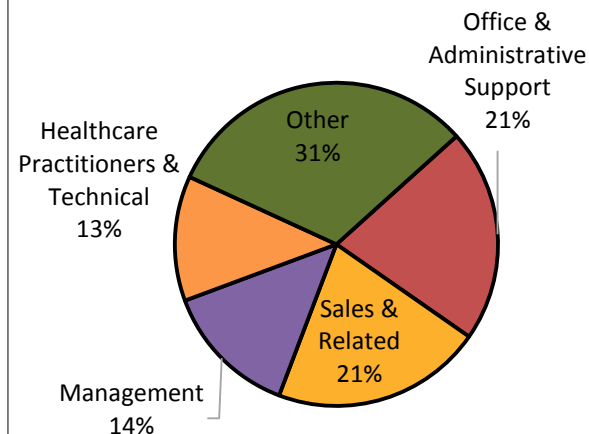
Pharmaceutical & Medicine Manufacturing



Soap, Cleaning Compound, & Toilet Preparation Manufacturing



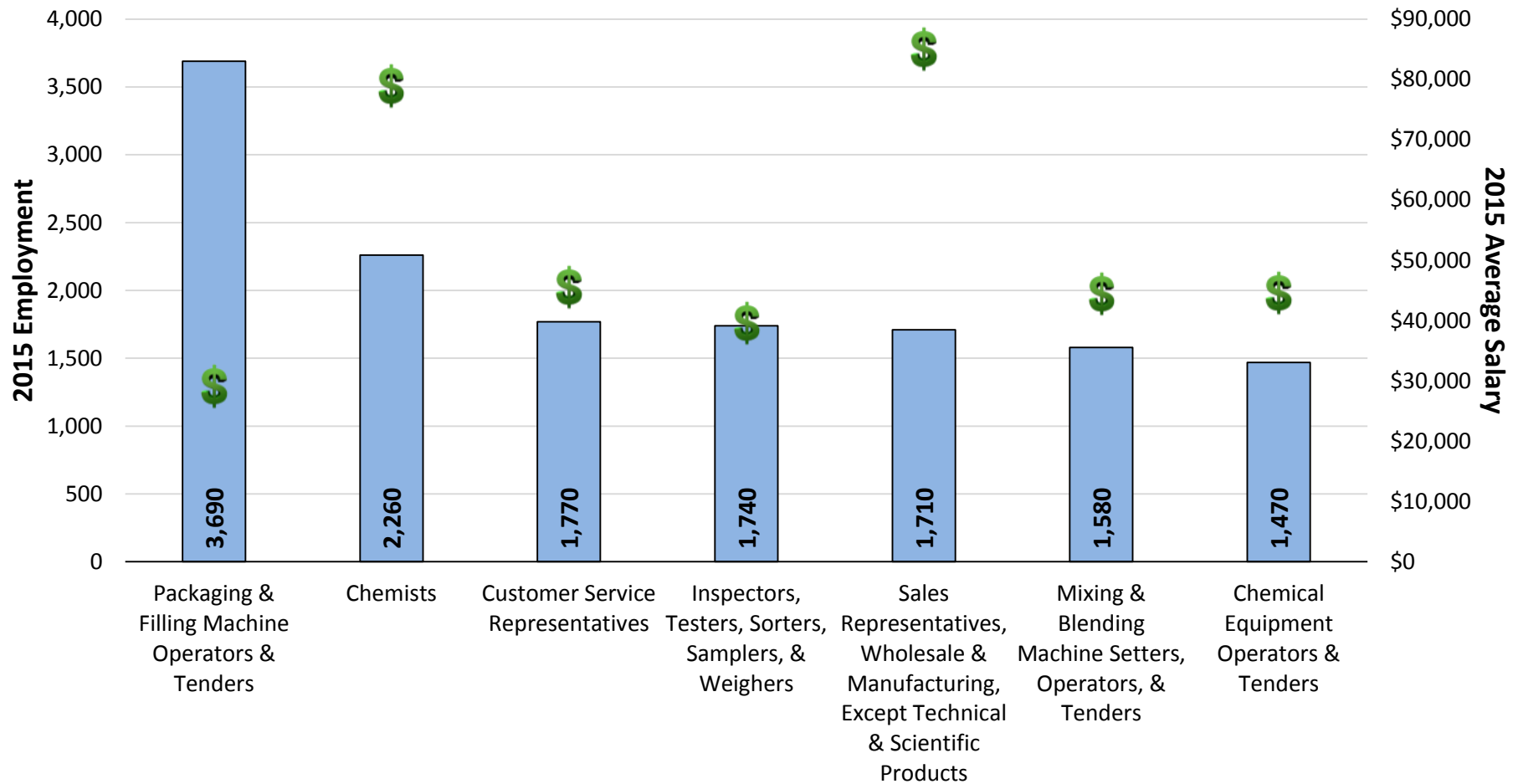
Drugs & Druggists' Sundries Merchant Wholesalers



- In all three industry groups, office & administrative support workers account for a significant portion of the employment.
- A majority of occupations in pharmaceutical and medicine manufacturing and soap, cleaning compound, and toilet preparation manufacturing are production related while occupations in drugs & druggists sundries merchant wholesalers are sales and related occupations.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

TOP PHARMACEUTICAL OCCUPATIONS, 2015



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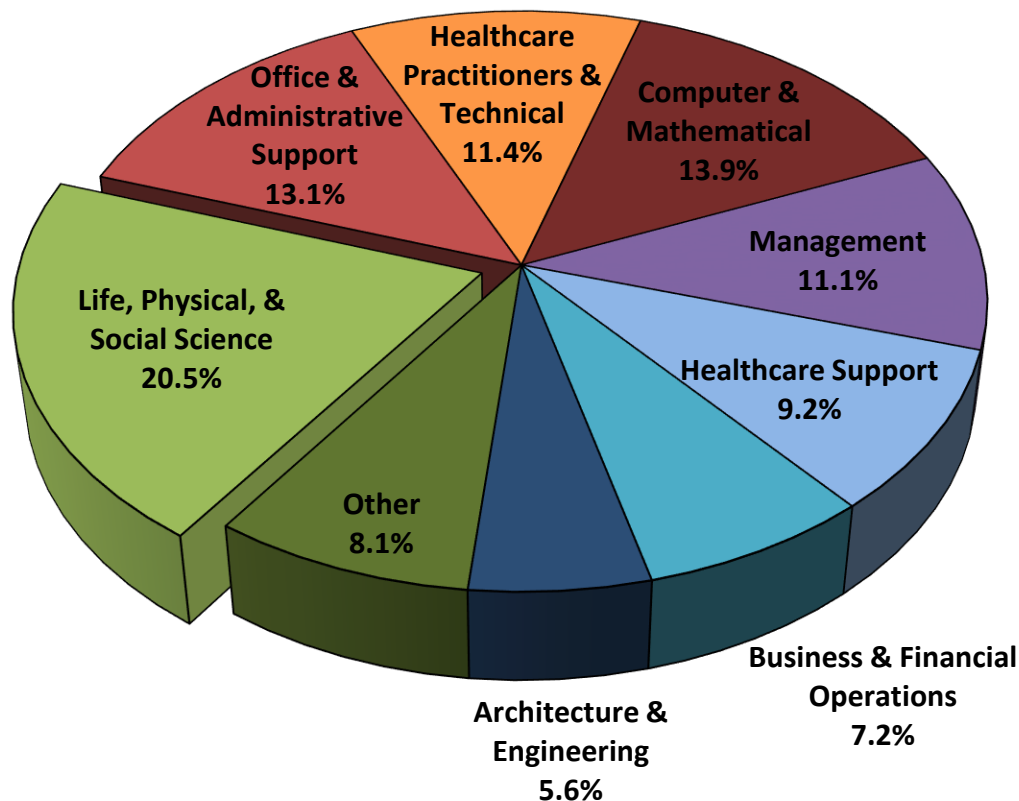


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nj.gov/labor

Source: NJ Department of Labor & Workforce Development, Occupational Employment Statistics, May 2015

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER BIOTECHNOLOGY (R&D) COMPONENT, 2015

Major Occupational Group Breakdown



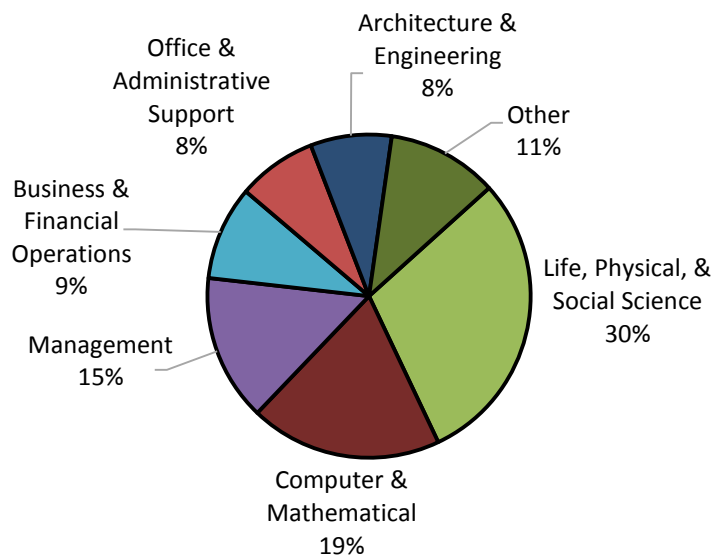
- An occupational analysis of 44,590* jobs revealed that five major occupational groups in this component accounted for more than two-thirds (69.9%) of the employment.
- Life, physical, and social science occupations employed the most in this component with more than 9,100 jobs, and accounted for more than one-fifth of the component.

*Note: Due to disclosure issues, of the total 44,610 jobs identified, 44,590 could be used for this occupational analysis.

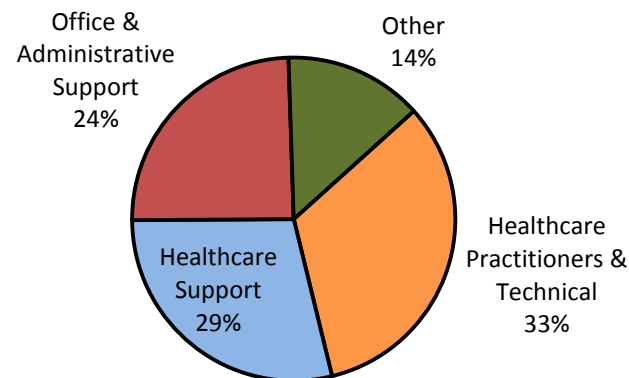


NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER BIOTECHNOLOGY (R&D) MAJOR OCCUPATIONAL GROUPS, 2015

Scientific Research & Development Services

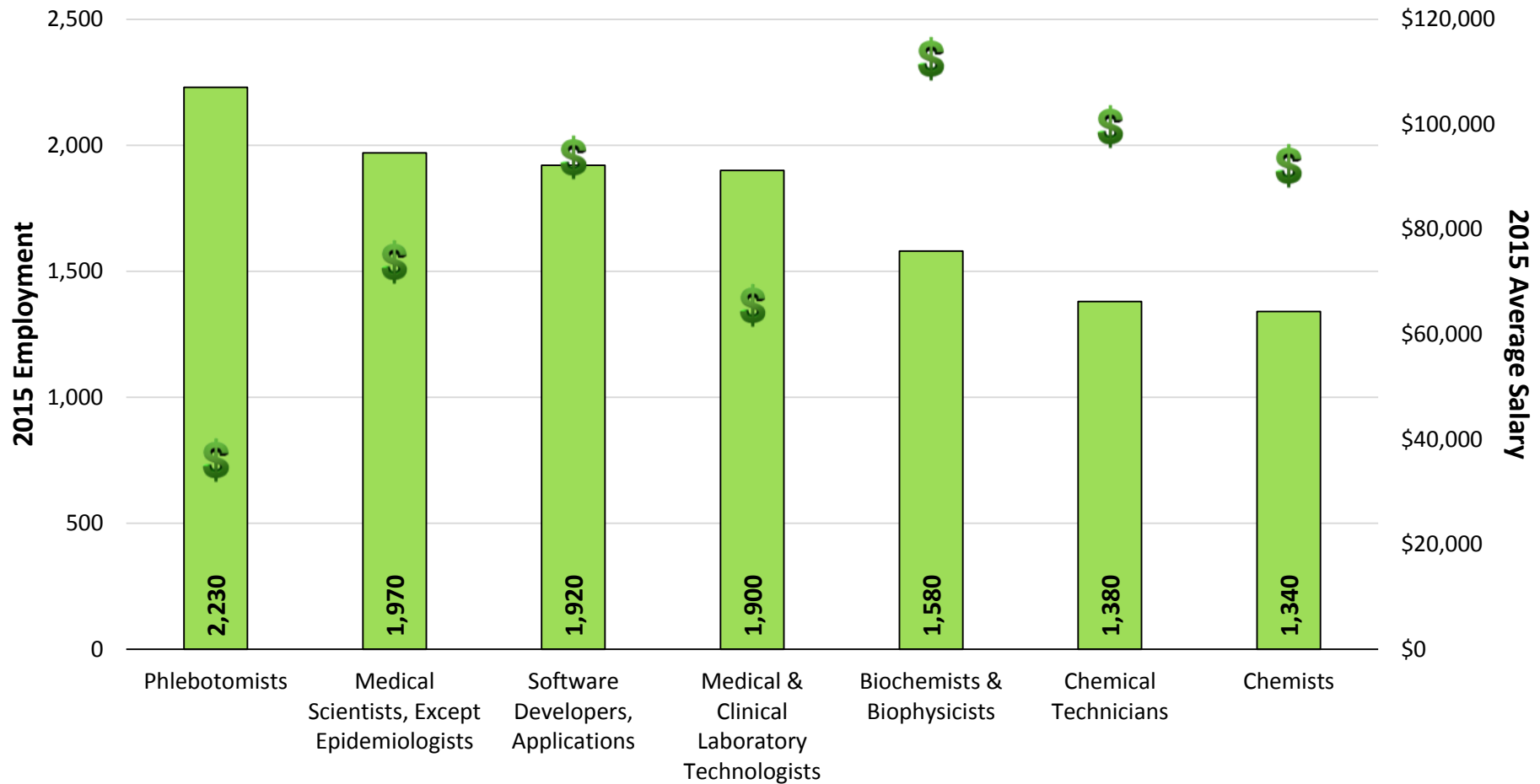


Medical and Diagnostic Laboratories



- Biotech's occupational groups show that these industry groups utilize a significant portion of professional, scientific, and technical workers with in-depth skills and knowledge related to science and healthcare.
- Nearly 90% of occupations found in the medical and diagnostic laboratories can be found in three major occupational groups: office and administrative support, healthcare support, and healthcare practitioners and technical.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER TOP BIOTECHNOLOGY (R&D) OCCUPATIONS, 2015



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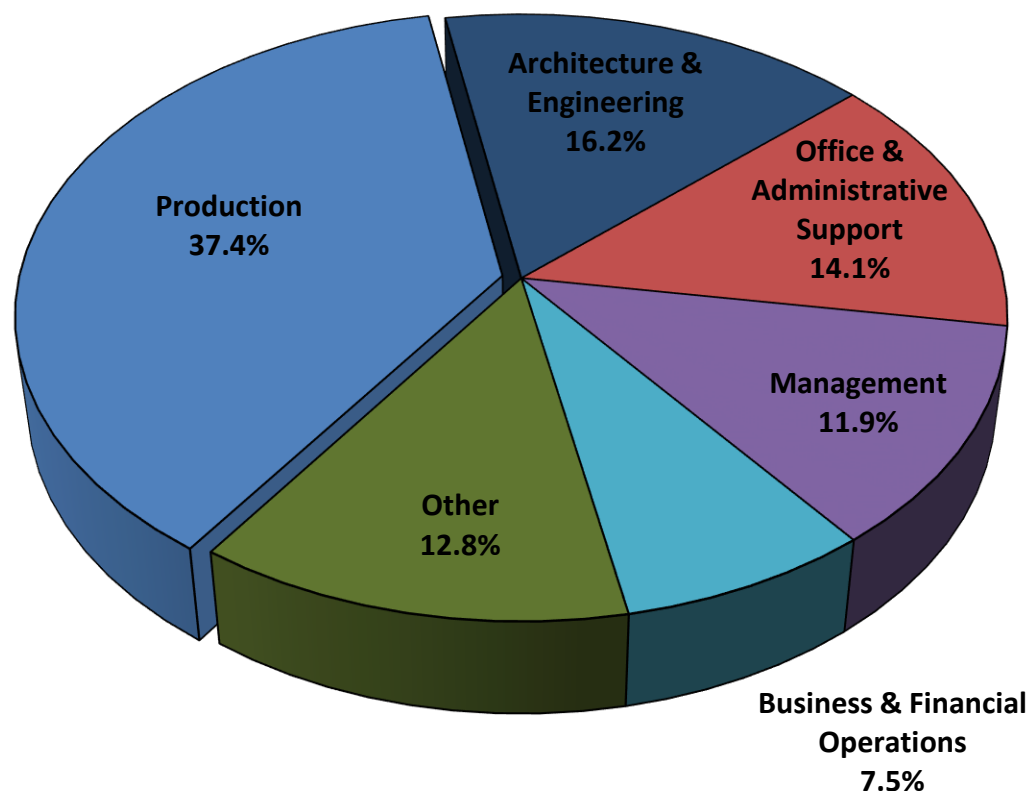


NEW JERSEY DEPARTMENT OF
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Source: NJ Department of Labor & Workforce Development, Occupational Employment Statistics, May 2015

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER MEDICAL DEVICE COMPONENT, 2015

Major Occupational Group Breakdown



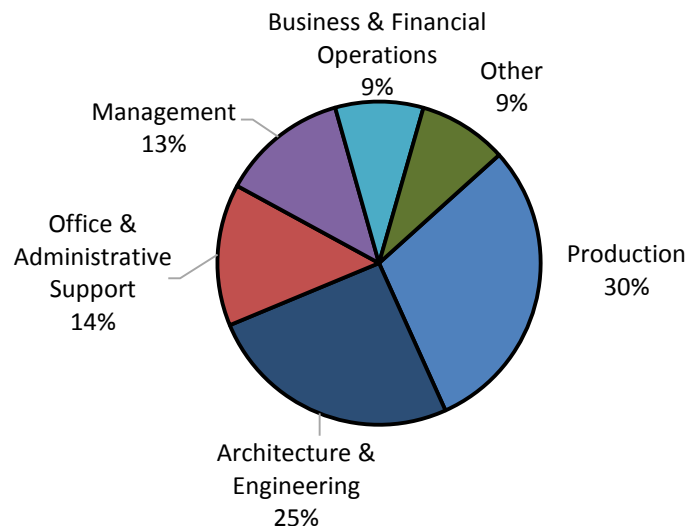
- An occupational analysis of 22,600* jobs revealed that five major occupational groups in this component accounted for nearly ninety percent of the employment (87.2%).
- Production occupations employed the most in this component with 8,460 jobs, and accounted for nearly half of the component (37.4%).

*Note: Due to disclosure issues, of the total 24,120 jobs identified, only 22,600 could be used for this occupational analysis.

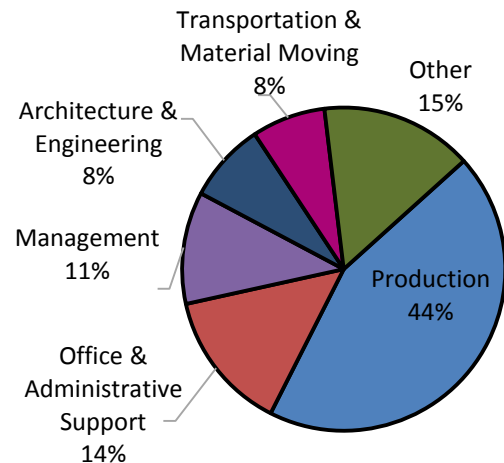
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MEDICAL DEVICES MAJOR OCCUPATIONAL GROUPS, 2015

Navigational, Measuring, Electromedical, & Control Instruments Manufacturing



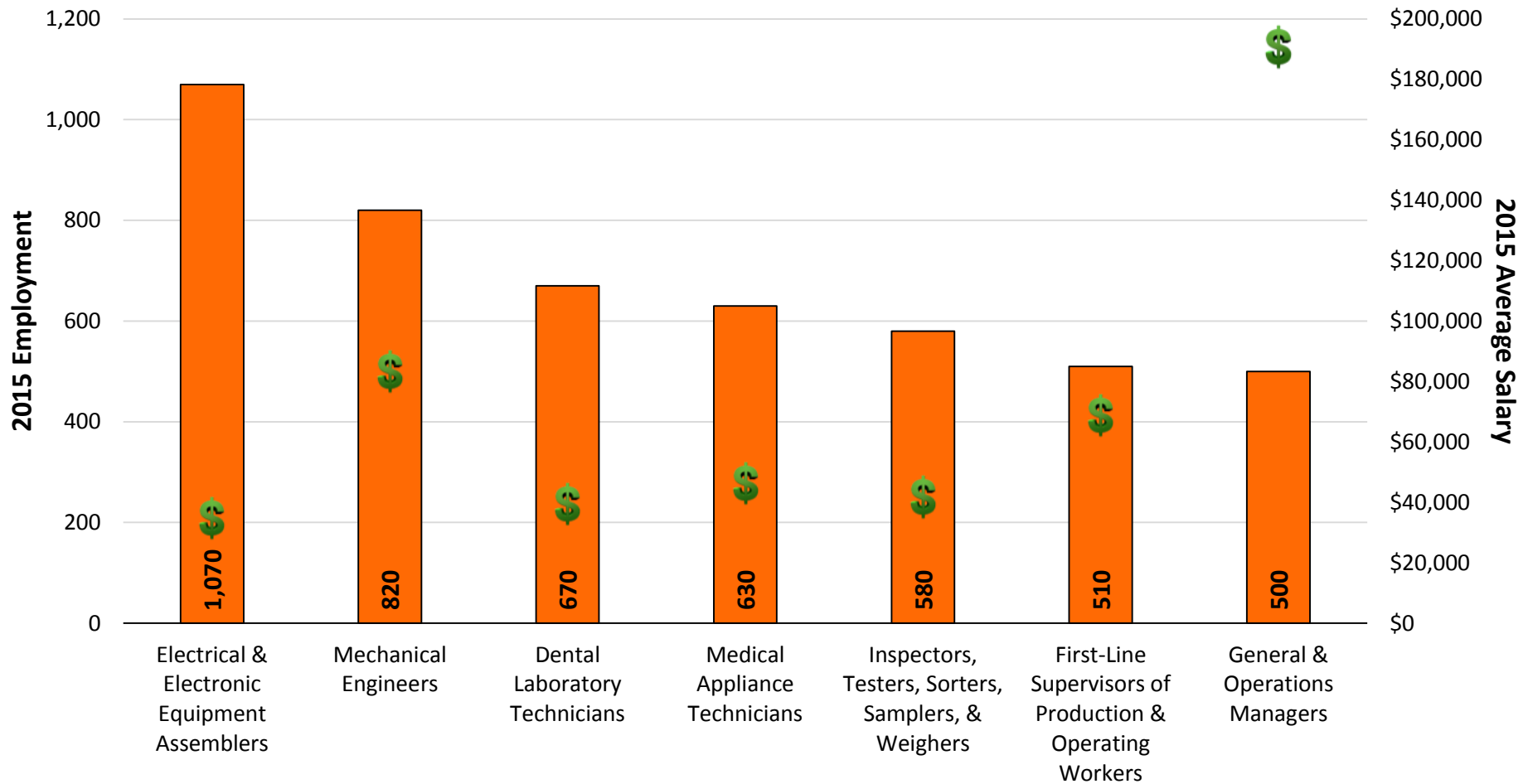
Medical Equipment and Supplies Manufacturing



- While the percentages differ, the top four occupational groups reveal that these two industry groups both have a need for many of the same type of workers.
- Occupations found in the medical devices component are production based, but other occupational family groups that make up a significant percentage are architecture and engineering, and business and financial.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

TOP MEDICAL DEVICE OCCUPATIONS, 2015



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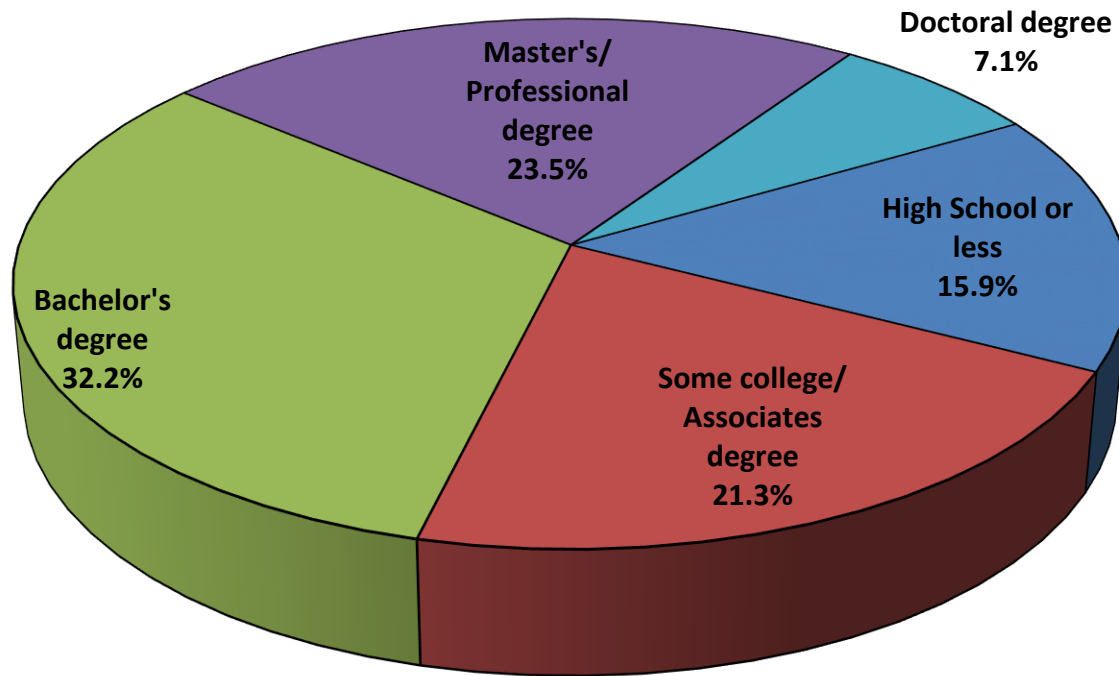
Source: NJ Department of Labor & Workforce Development, Occupational Employment Statistics, May 2015

LIFE SCIENCES INDUSTRY CLUSTER: 2015 DEMOGRAPHIC OVERVIEW



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER EDUCATION CHARACTERISTICS

Educational Breakdown



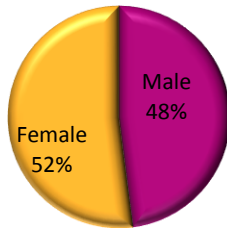
- It is often mentioned that life sciences related employers require a well-educated and highly skilled workforce to meet the high level and technical demands of many of the occupations they need to fill.
- Nearly two-thirds of New Jersey's workforce employed in this cluster hold at least a Bachelor's degree, many holding even more advanced degrees.



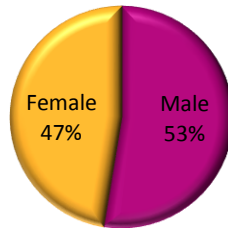
NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

NJ RESIDENTS IN LIFE SCIENCES INDUSTRY CLUSTER WORKFORCE

Life Sciences



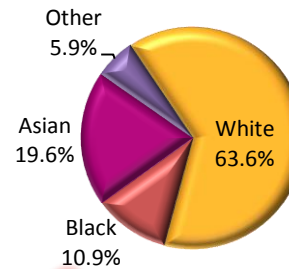
All Industries



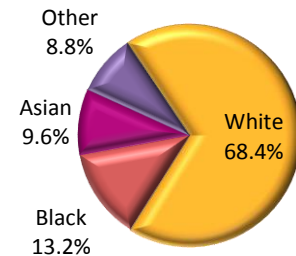
Females outnumber males by 4.8%.

The life sciences workforce has a greater proportion of NJ residents who are Asian (19.6%).

Life Sciences

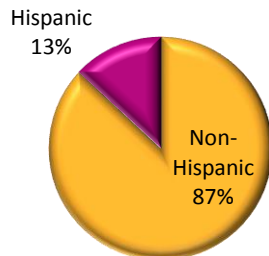


All Industries

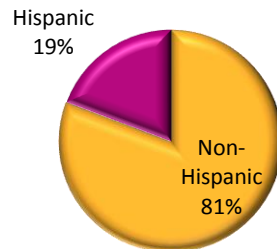


The life sciences workforce has fewer Hispanics than average.

Life Sciences



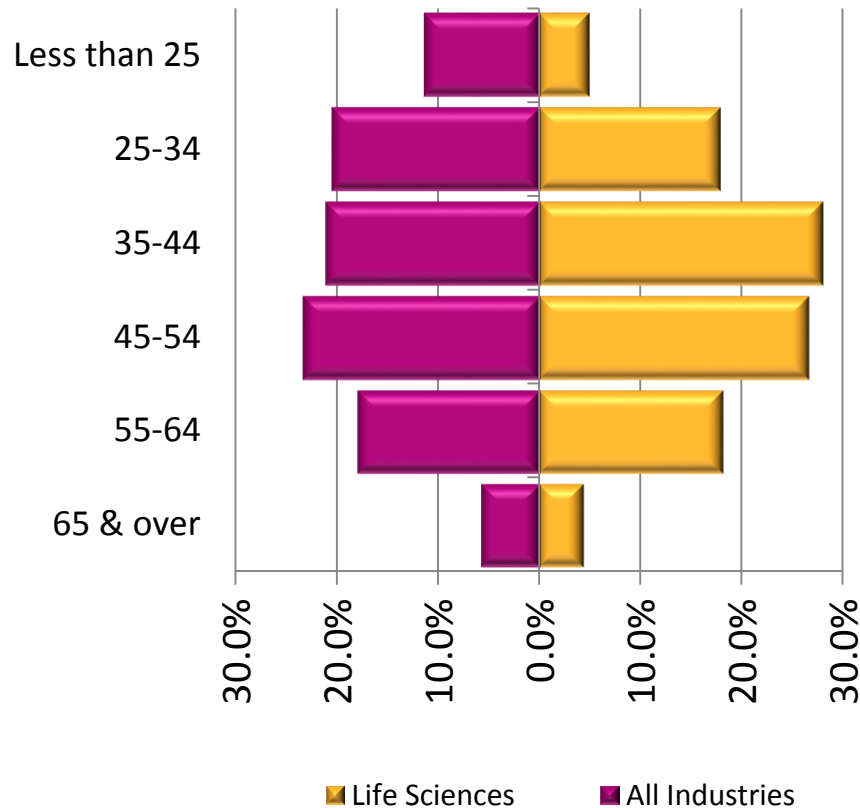
All Industries



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

LIFE SCIENCES INDUSTRY CLUSTER VS. TOTAL NONFARM

Age Breakdown of Workers in Life Sciences
and All Industries
New Jersey, 2015

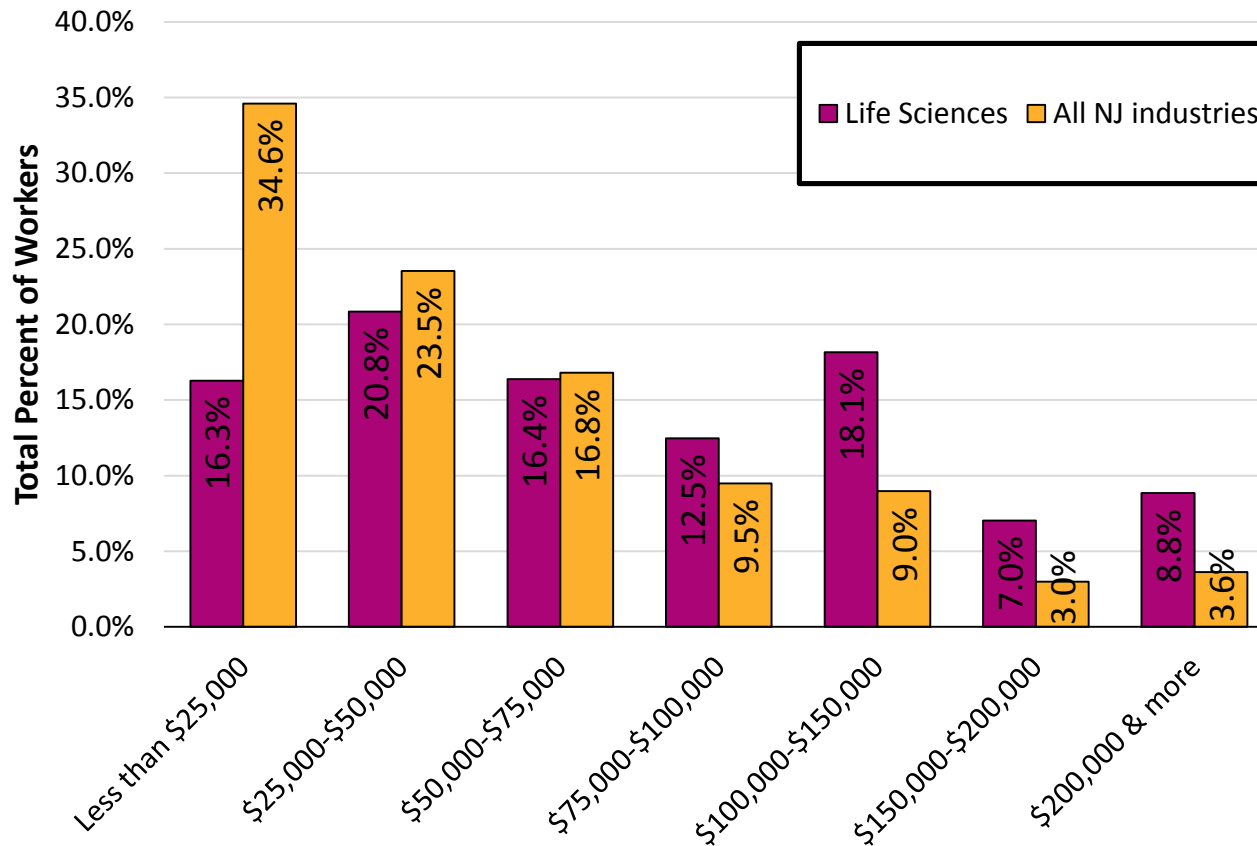


- The workforce of the Life Sciences industry is older than average with slightly less than 50 percent aged 45 and up compared to only 47 percent overall.
- The largest disparity among age cohorts occurs in the 35-44 year old age group, where nearly 30 percent of the life sciences industry cluster is found.
- 4.4 percent of the current NJ resident life sciences workforce is aged 65 and older.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

NJ RESIDENTS PERSONAL EARNINGS

Personal Earnings 2015



- Nearly two-thirds of the worker (62.9%) in this cluster earned over \$50,000, whereas 58.1% of all workers (in all industries combined) earned less than \$50,000.
- The percentage of workers making \$150,000 or greater is almost a 3:1 ratio in favor of this cluster.



LIFE SCIENCES INDUSTRY CLUSTER: TOP OCCUPATIONS OUTLOOK



NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER

TOP LIFE SCIENCES OCCUPATIONS OUTLOOK ACROSS ALL INDUSTRIES

Occupational Title	Employment				Average Annual		
	Actual	Projected	Change 2014 - 2024		Job Openings		
	2014	2024	Number	Percent	Total	Growth	Replacement
Phlebotomists	4,880	5,890	1,010	20.7	200	100	100
Laborers & Freight, Stock, & Material Movers, Hand	83,850	95,360	11,510	13.7	3,650	1,150	2,500
Medical & Clinical Laboratory Technologists	4,850	5,470	620	12.8	180	60	120
Biochemists & Biophysicists	3,700	4,130	430	11.6	140	40	100
Packers & Packers, Hand	30,170	33,280	3,110	10.3	1,110	310	800
Customer Service Representatives	66,030	71,660	5,630	8.5	2,190	560	1,630
General & Operations Managers	47,200	51,150	3,960	8.4	1,590	400	1,200
Pharmacy Technicians	9,200	9,890	700	7.6	160	70	90
Natural Sciences Managers	4,090	4,390	310	7.5	120	30	90
Chemical Technicians	4,430	4,630	200	4.6	150	20	130
Packaging & Filling Machine Operators & Tenders	14,610	15,020	420	2.8	560	40	520
Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	43,610	44,820	1,210	2.8	1,020	120	900
Secretaries & Administrative Assistants, Except Legal, Medical, and Executive	65,690	66,020	330	0.5	730	30	690
Chemists	5,520	5,540	20	0.3	120	0	120
Industrial Engineers	3,760	3,730	-30	-0.9	110	0	110
Inspectors, Testers, Sorters, Samplers, & Weighers	10,490	10,340	-150	-1.4	260	0	260
First-Line Supervisors of Production & Operating Workers	13,850	13,440	-400	-2.9	220	0	220
Mixing & Blending Machine Setters, Operators, & Tenders	4,900	4,650	-250	-5.1	110	0	110
Chemical Equipment Operators & Tenders	3,040	2,700	-340	-11.3	100	0	100
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders	3,830	3,370	-460	-12.0	140	0	140



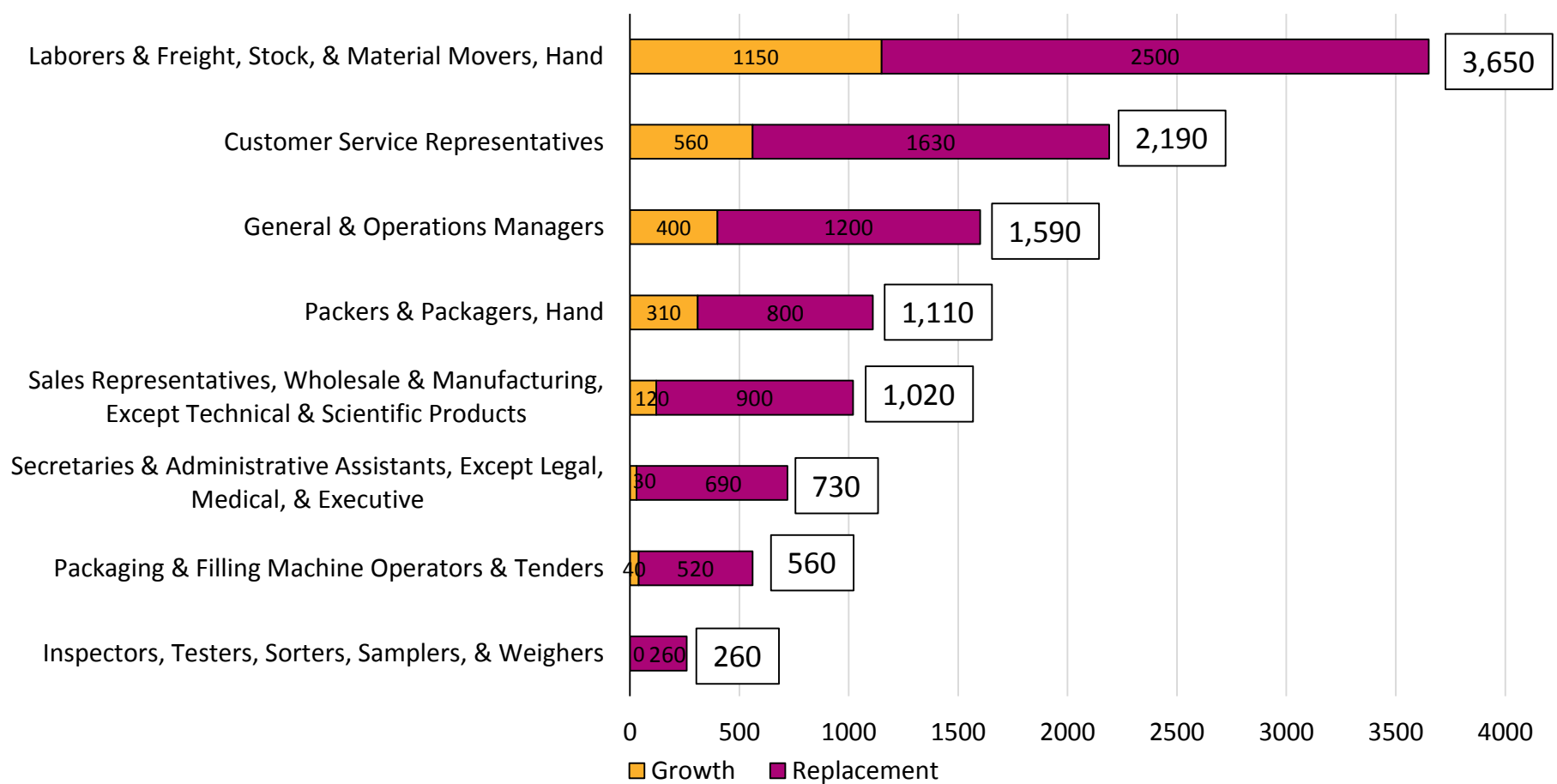
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Source: New Jersey Department of Labor and Workforce Development, 2014–2024 Industry and Occupational Employment Projections. Note: Total job openings may not add up exact due to rounding.

NEW JERSEY LIFE SCIENCES INDUSTRY CLUSTER PROJECTED ANNUAL AVERAGE OPENINGS FOR TOP OCCUPATIONS

2014-2024 Projected Annual Average Job Openings



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