

THE IMPACT OF LIFE SCIENCE IN CALIFORNIA

The life science industry has a substantial economic impact on employment and income in California. Direct employment in the life science industry increased 10% between the 3rd quarters of 2011 and 2016: from 327,820 to 360,486 jobs. The 2016 average wage in the life science sector was \$108,752, well above the average annual wage for all industries of \$61,798. Direct industry employment is expected to increase 2% to 366,022 by 2021.

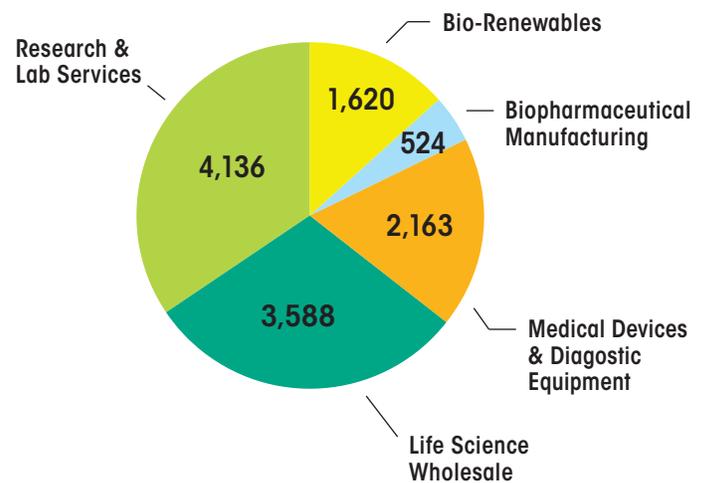
Research and Lab Services are expected to grow the most, adding 9,098 jobs in the next five years.

ANNUAL ECONOMIC IMPACT

DESCRIPTION	IMPACT
Economic Activity	\$317 billion
Gross Area Product	\$171.5 billion
Attributable Jobs	1.1 million
Labor Income	\$92 billion

The industry generates **\$317 billion** in annual economic activity.

BREAKDOWN OF LIFE SCIENCE COMPANY SECTORS



There are **12,031** life science establishments in California.

NIH Funding

Private and public institutions, including universities, labs, and companies in California received almost \$3.6 billion in NIH funding in 2016. This funding provides the resources that allows California to continue to be national force in life science research.

California received **\$3.59 Billion** in Research Funding from National Institutes of Health (NIH) for FY2016.

SUBSECTOR

EMPLOYMENT IN 2016



Bio-Renewables

35,679

Includes biofuels, specialty enzymes and chemicals, algae research, and key elements of agriculture.



Biopharmaceutical Manufacturing

50,176

The production of medicines, botanicals, pharmaceuticals, in-vitro diagnostic substances, and biological products.



Medical Devices & Diagnostic Equipment

78,277

Laboratory equipment and supplies, optical instruments, electromedical apparatus, surgical and medical instruments, and dental equipment.



Life Science Wholesale

53,826

Wholesaling and distributing medical equipment and supplies and the wholesaling of drugs and related products.



Research & Lab Services

142,528

Research and development in biotech, medical laboratories, and industries representing testing laboratories, as well as higher education.

Economic Impact data prepared by TClower & Associates

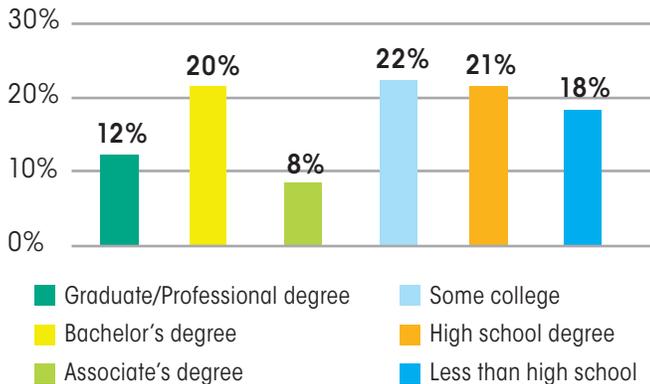
CALIFORNIA POPULATION OVERVIEW

- California continues to outpace the national average in population growth, adding over 1.8 million new residents between 2010 and 2015.
- Northern California’s pace of growth is faster than the state overall with the strongest growth in Alameda, Contra Costa, San Francisco, and Santa Clara counties.
- In Southern California, Riverside, San Diego, and Orange counties lead population growth.
- With the exception of Los Angeles County, the largest counties saw the highest growth rates, reflecting long term urbanization trends.

CALIFORNIA POPULATION FROM 2010-2015

GEOGRAPHY	2010	2015
United States	309.3 million	321.4 million
California	37.3 million	39.1 million
Northern California	7.2 million	7.7 million
Southern California	19.2 million	20 million

EDUCATIONAL ATTAINMENT



In terms of workforce preparedness, California closely matches the United States as a whole. In 2015, 12% of California's population held a graduate or professional degree, versus 11.6% nationally. Similarly, 20.3% of Californian's held a Bachelor's degree, slightly exceeding the national average of 19%.

This is a condensed summary of the Economic Impact Report produced by Biocom and TClower & Associates. For the full report, please visit our website: www.biocom.org

FOREIGN EXPORTS OF LIFE SCIENCE PRODUCTS

SUBSECTOR	EXPORTS
Bio-Renewables	\$2.4 billion
Biopharmaceutical Manufacturing	\$9.5 billion
Medical Devices & Diagnostic Equipment	\$12.2 billion
Life Science Wholesale	\$1.8 billion
Research & Lab Services	\$2.2 billion
TOTAL LIFE SCIENCE INDUSTRY	\$28.1 billion

Life science exports in the state of California totaled more than \$28.1 billion in 2015, driven by more than \$12.2 billion in Medical Devices and Diagnostic Equipment shipments. Life Science Wholesale had the lowest export amount, coming in at \$1.8 billion.

The most competitive industry subsectors in California are Biopharmaceuticals; Medical Devices and Diagnostic Equipment; and Research.

About Biocom

Biocom is the largest, most experienced leader and advocate for California’s life science sector. We work on behalf of more than 900 members to drive public policy, build an enviable network of industry leaders, create access to capital, introduce cutting-edge STEM education programs, and create robust value-driven purchasing programs.

Founded in 1995 in San Diego, Biocom provides the strongest public voice to research institutions and companies that fuel the local and state-wide economy. Our goal is simple: to help our members produce novel solutions that improve the human condition. In addition to its San Diego headquarters, Biocom has continuous staff presence in Los Angeles, San Francisco, Sacramento, Washington, D.C. and Tokyo. Our broad membership benefits apply to biotechnology, pharmaceutical, medical device, genomics and diagnostics companies of all sizes, as well as to research universities and institutes, clinical research organizations, investors and service providers.