

# Ohio Life Sciences Industry

Assessment and Economic Impact Report

Prepared for: Ohio Life Sciences Association

Prepared by: TEconomy Partners, LLC

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Ohio Life Sciences



**TECONOMY**  
PARTNERS LLC



For more information on this report please contact its authors with TEconomy Partners:

Ryan Helwig and Marty Grueber

1.800.TEC.1296 | [info@teconomypartners.com](mailto:info@teconomypartners.com) | [www.teconomypartners.com](http://www.teconomypartners.com)

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# Executive Summary

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**Ohio's life sciences industry is large, dynamic, and growing. Its recent strong growth along the "Ohio Discovery Corridor" and in other parts of the state has attracted significant new investments and is a major driver of job growth. The industry's innovations and advanced manufacturing are focused on lifesaving and quality-of-life-improving products and services for Ohioans and others worldwide.**

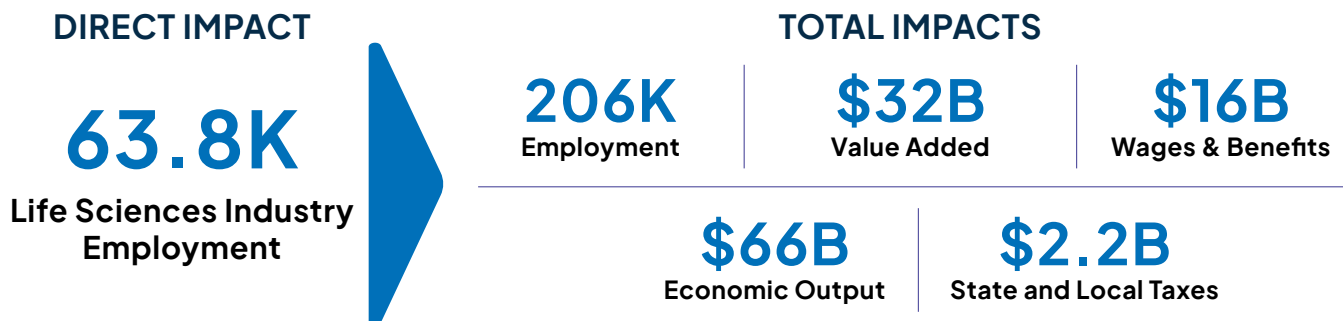
This *Industry Assessment and Economic Impact Report* examines Ohio's life science industry's growth, evolution, and impacts across the state. It also assesses several elements of the state's innovation ecosystem for life sciences development. The report identifies and highlights strengths and positive trends while also illuminating "*Ohio's Challenges*" for industry development. The assessment utilizes national comparisons and a significant benchmarking framework that directly compares Ohio's industry performance and position with broader ecosystem assessments of six states that Ohio often competes with for life sciences development opportunities.

## **Key findings and highlights from the industry and economic impact assessment include:**

- In 2023, the industry employed nearly 64,000 Ohioans in almost 4,900 individual business establishments spanning every region of the state.
- Ohio's life sciences companies have increased their payrolls significantly, growing employment by 12.8% since 2019, well outpacing overall private sector growth of just 1.0% for Ohio during this latest 4-year period which includes the COVID-19 pandemic and subsequent economic recovery.
- Ohio's life sciences job growth has aligned closely with that for the nation, averaging 3.1% increases annually since 2019 compared with average annual growth of 3.5% for the U.S. The pace of hiring has slowed, however, in 2023 for both the state and the national sector with over-the-year increases at just 1.5% and 1.2%, respectively.
- Ohio has a sizable presence across each of the life sciences industry's five major subsectors. What stands out for Ohio is the strong, double-digit growth context for three of the five subsectors since 2019—life science-related distribution; research, testing, and medical labs; and pharmaceuticals. Ohio's life science-related distribution subsector is the largest individual segment and "specialized" in its concentration relative to national averages.

- Ohio’s life sciences industry is statewide in its geographic footprint. As one might expect, Ohio’s major population and employment centers in Greater Columbus, Cleveland, and Cincinnati are driving the largest regional footprints for the industry overall in Central, Northeast, and Southwest Ohio, respectively, where each leading region employs between 12,000 and 20,000 Ohioans in the industry. Five of seven Ohio regions have experienced net job gains since 2019 in the life sciences.
- The life science industry stands out for being a generator and source for high-quality jobs, including a breadth of entry-level opportunities. In 2023 Ohio’s life sciences industry workers earned nearly \$105,000, on average, which is more than \$42,000 or 67% above the state’s private sector average. Ohio workers in life science-related occupations earn more, on average, for entry-level job opportunities compared with the overall economy—and in most cases, significantly more. Entry-level workers in life science-related roles earn an estimated 48% more, on average, in Ohio compared with their entry-level counterparts in all occupations—approximately \$44,000 per year versus nearly \$30,000 for all occupations.
- Ohio’s large and steadily growing life sciences industry and its substantial wage premiums paid to its workforce translate into significant impacts on Ohio’s economy. In 2023, Ohio’s life sciences industry and its broader economic multiplier effects:
  - Employed and supported more than 206,000 Ohio workers, representing an employment multiplier of 3.24—for every direct job in the state’s life sciences industry, an additional 2.24 Ohio jobs are supported (see Figure ES-1).
  - Generated and supported more than \$66.0 billion in total economic (output) impacts.
  - Generated and supported \$32.4 billion in total value added impacts, which represent the industry’s contribution to gross state product (GSP). This value added impact accounts for 5.3% of Ohio’s private sector GSP.<sup>1</sup>

**Figure ES-1. The Economic Impacts of Ohio’s Life Sciences Industry, 2023**



**Source:** TEconomy Partners analysis using employment data developed by TEconomy and IMPLAN State of Ohio model.

<sup>1</sup> State of Ohio private sector GSP data is from U.S. Bureau of Economic Analysis (BEA) in current 2023 dollars. For comparison all of Ohio’s manufacturing industries combined account for 16.80% of Ohio’s private sector GSP.

Successful life sciences clusters require and are built upon a high-functioning ecosystem that supports both basic and applied research and development with the appropriate resources, protects intellectual property, and allocates capital to promising and innovative new, emerging, and existing businesses. Considered all together, Ohio's innovation ecosystem represents a significant base of research, innovation, and funding activity (Figure ES-2).

**In terms of areas of strength for Ohio and where the state stands out relative to national and benchmark states, key findings and takeaways include:**

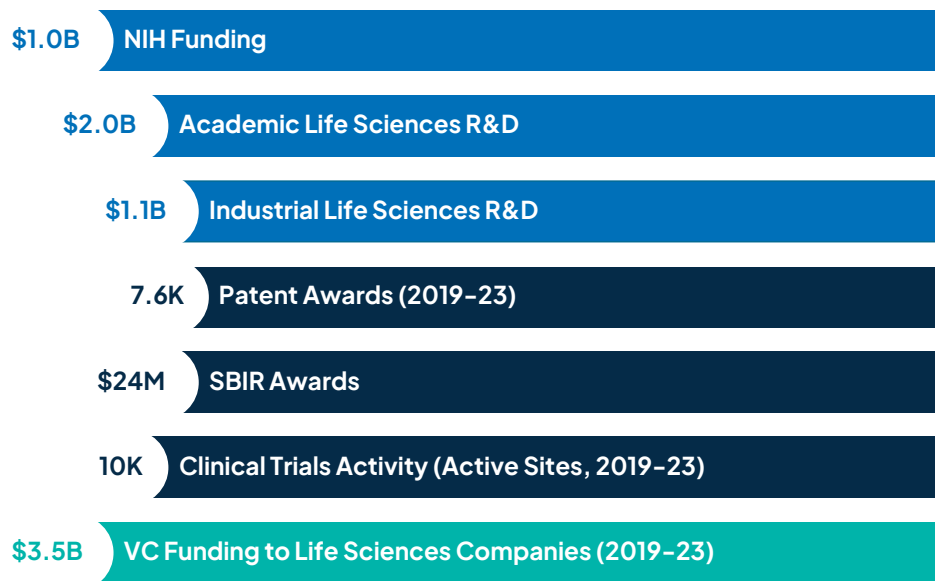
- In life sciences academic R&D, with a base of \$2 billion in activity in the latest year, Ohio has above-average levels of research expenditures. Ohio has seen rapid growth in university R&D since 2019, outpacing the national average and all six comparison states.
- In innovation activities, Ohio is well above the national average in its patenting activity in life science-related technologies relative to its GSP. The state has a relatively high level of clinical trials site activity.
- In growth capital, Ohio has seen above-average increases in VC investments in life sciences companies.

**In terms of identified challenges for Ohio, key findings include:**

- Capital/Funding: relative to U.S. averages, Ohio is well below in life sciences VC deal activity and funding levels; the state lags national averages in federal SBIR/STTR award and funding levels.
- Industry R&D and NIH Funding: Ohio is lagging in relative levels and growth of both life science-related industrial R&D and NIH funding relative to the nation and key comparison states.
- Limited Wet Lab Space: a study commissioned by Ohio Life Sciences (OLS) and its regional partners has found demand well outstripping the supply of available wet lab space in Greater Columbus<sup>2</sup>, and OLS members and stakeholders point to broader challenges accessing wet lab space across the state for private life sciences firms.

2 Shift Health, "Enabling Innovation: Unpacking the Urgent Need for Wet Lab Space in the Columbus Region," January 2024.





**Figure ES-2. Summarizing Ohio’s Innovation Ecosystem for Life Sciences Development**



**Note:** Data represent totals for latest year available, generally 2023; exceptions are for clinical trials activity and VC funding levels, which both represent cumulative totals for the full 2019-23 period.

Ohio’s recent growth and its robust baseline of activity across its life sciences industry and associated innovation ecosystem signal a strong and exciting future for the state’s life sciences cluster. This future and continued success, however, are not guaranteed. Several areas of “Ohio’s Challenges” have been identified throughout this report and assessment. They are summarized and presented in Figure ES-3, along with a high-level directional assessment of each major area included in this report. OLS and its industry stakeholders and ecosystem partners must continue to monitor and address these areas to ensure the vibrant and competitive future for which Ohio is well-positioned in the life sciences.

**Figure ES-3. Summarizing Ohio’s Position, Performance Across Life Sciences Industry and Innovation Ecosystem Elements**

Industry or Ecosystem Element	OH Position, Performance	Ohio’s Strengths	Ohio’s Challenges
Industry Position, Performance		<ul style="list-style-type: none"> <li>Ohio firms have increased employment by double-digits since 2019, well outpacing limited overall private sector growth.</li> <li>Ohio outpacing the nation in growth of two industry subsectors—research, testing, &amp; med labs; pharmaceuticals.</li> <li>The state has a specialized employment concentration in life science-related distribution.</li> </ul>	<ul style="list-style-type: none"> <li>Ohio slightly behind national pace of industry employment growth and middle of pack among comparison states in employment size, growth, and relative concentration.</li> </ul>
Research and Development		<ul style="list-style-type: none"> <li>Ohio has above-average levels of university life sciences R&amp;D expenditures.</li> <li>Rapid growth in university R&amp;D outpacing national average and all comparison states.</li> </ul>	<ul style="list-style-type: none"> <li>Lagging in relative levels and growth of both industrial R&amp;D and NIH funding relative to nation, comparison states.</li> </ul>
Innovation		<ul style="list-style-type: none"> <li>Among leading states and well above-average in life science-related patent awards and growth.</li> <li>Relatively high level of clinical trials site activity.</li> </ul>	<ul style="list-style-type: none"> <li>Lagging national averages and nearly all comparison states in SBIR/STTR award and funding levels.</li> </ul>
Growth Capital		<ul style="list-style-type: none"> <li>Ohio has seen above-average growth in life science-related VC investments.</li> </ul>	<ul style="list-style-type: none"> <li>Relative to U.S. averages, Ohio well below in VC deal activity and funding levels.</li> <li>Middle of the comparison states in VC investment levels.</li> </ul>

Source: TEconomy Partners’ analyses.



