

# Maryland

## The U.S. Bioscience Economy:

### Advancing Innovation and Strengthening States and Regions



Maryland retains a large and specialized bioscience industry employment base. In 2025, bioscience businesses accounted for 51,705 jobs across 3,594 state establishments. Industry employment grew by 3.3 percent since 2021. Maryland's bioscience industry retains strong specializations in research, testing, and medical labs and in pharmaceuticals. The research, testing, and medical laboratories subsector accounts for nearly 59 percent of industry employment and is more than twice as concentrated as nationally, with a location quotient of 2.33. Gains across four major subsectors more than offset a decline in pharmaceuticals. Average annual bioscience wages were \$158,224, approximately twice the state's private sector average. Maryland universities conducted nearly \$2.9 billion in bioscience-related R&D in FY 2024, and state institutions received almost \$2.2 billion in NIH funding in FY 2025. Venture capital investments in bioscience companies totaled \$4.0 billion from 2021 through 2025, while Maryland inventors were affiliated with 4,581 bioscience-related patents.

## BIOSCIENCE PERFORMANCE METRICS

### Summary of State Performance in Selected Bioscience-related Metrics

| METRIC                                        |                                       | Maryland    | United States | Quintile |
|-----------------------------------------------|---------------------------------------|-------------|---------------|----------|
| Bioscience Industry, 2025                     | Bioscience Industry Employment        | 51,705      | 2,312,617     | II       |
|                                               | Bioscience Industry Location Quotient | 1.34        | n/a           | I        |
|                                               | Bioscience Industry Establishments    | 3,594       | 156,463       | II       |
| Academic Bioscience R&D Expenditures, FY 2024 | Bioscience R&D (\$ thousands)         | \$2,870,363 | \$68,902,940  | I        |
|                                               | Bioscience Share of Total R&D         | 45%         | 63%           | V        |
|                                               | Bioscience R&D Per Capita             | \$460       | \$203         | I        |
| NIH Funding, FY 2025                          | Funding (\$ thousands)                | \$2,160,082 | \$36,741,235  | I        |
|                                               | Funding Per Capita                    | \$345       | \$107         | I        |
| Bioscience Venture Capital, 2021-25           | Investments (\$ millions)             | \$3,969.85  | \$297,644     | II       |
| Bioscience-Related Patents, 2021-25           | Total Patents                         | 4,581       | 138,607       | II       |

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile. For source notes, see end of State Profile.

# Maryland

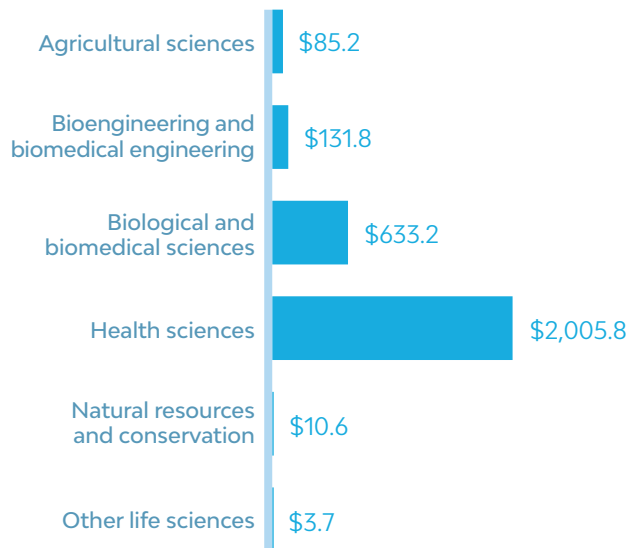
| INDUSTRY SUBSECTOR                                |                     | Maryland  |                  | United States |                  |
|---------------------------------------------------|---------------------|-----------|------------------|---------------|------------------|
|                                                   |                     | 2025      | 2021-2025 Change | 2025          | 2021-2025 Change |
| Agricultural Feedstock and Industrial Biosciences | Establishments      | 26        | 10.5%            | 2,158         | 10.7%            |
|                                                   | Employment          | 291       | 20.3%            | 71,331        | 2.2%             |
|                                                   | Location Quotient   | 0.25      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$89,781  | 15.1%            | \$105,506     | 14.7%            |
| Bioscience-Related Distribution                   | Establishments      | 753       | -11.2%           | 68,949        | 10.0%            |
|                                                   | Employment          | 8,307     | 11.2%            | 667,651       | 10.7%            |
|                                                   | Location Quotient   | 0.75      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$144,732 | 9.2%             | \$144,792     | 19.0%            |
| Medical Devices and Equipment                     | Establishments      | 244       | 36.1%            | 13,595        | 24.6%            |
|                                                   | Employment          | 3,826     | 13.4%            | 430,363       | 1.9%             |
|                                                   | Location Quotient   | 0.53      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$120,943 | 20.9%            | \$110,757     | 13.9%            |
| Pharmaceuticals                                   | Establishments      | 209       | 44.4%            | 7,880         | 31.0%            |
|                                                   | Employment          | 9,022     | -11.4%           | 363,904       | 5.4%             |
|                                                   | Location Quotient   | 1.49      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$232,888 | 43.2%            | \$146,506     | 16.3%            |
| Research, Testing, and Medical Laboratories       | Establishments      | 2,362     | 22.5%            | 63,881        | 37.0%            |
|                                                   | Employment          | 30,258    | 5.1%             | 779,368       | 8.1%             |
|                                                   | Location Quotient   | 2.33      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$145,037 | 3.8%             | \$167,555     | 13.7%            |
| Total Bioscience Industry                         | Establishments      | 3,594     | 15.1%            | 156,463       | 22.1%            |
|                                                   | Employment          | 51,705    | 3.3%             | 2,312,617     | 7.0%             |
|                                                   | Location Quotient   | 1.34      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$158,224 | 12.8%            | \$145,188     | 16.0%            |
| Total Private Sector                              | Establishments      | 195,736   | 13.1%            | 11,985,043    | 12.5%            |
|                                                   | Employment          | 2,230,280 | 6.2%             | 133,872,972   | 8.5%             |
|                                                   | Location Quotient   | 1.00      |                  | n/a           |                  |
|                                                   | Average Annual Wage | \$78,614  | 13.3%            | \$78,863      | 16.3%            |

Note: U.S. employment metrics include Puerto Rico.

## BIOSCIENCE RESEARCH IN MARYLAND

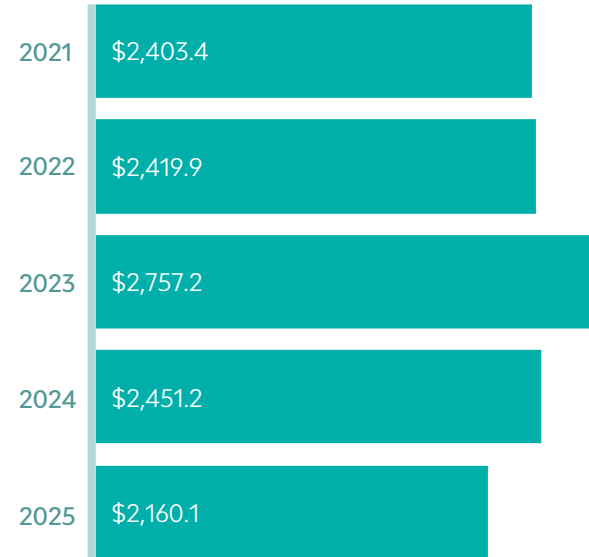
### Bioscience Academic R&D Expenditures

\$ Millions, FY 2024



### NIH Awards

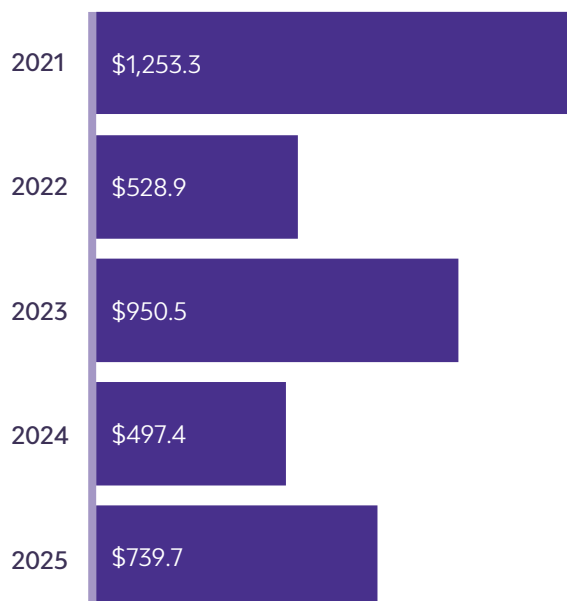
\$ Millions, FY 2021-2025



## BIOSCIENCE VENTURE CAPITAL IN MARYLAND

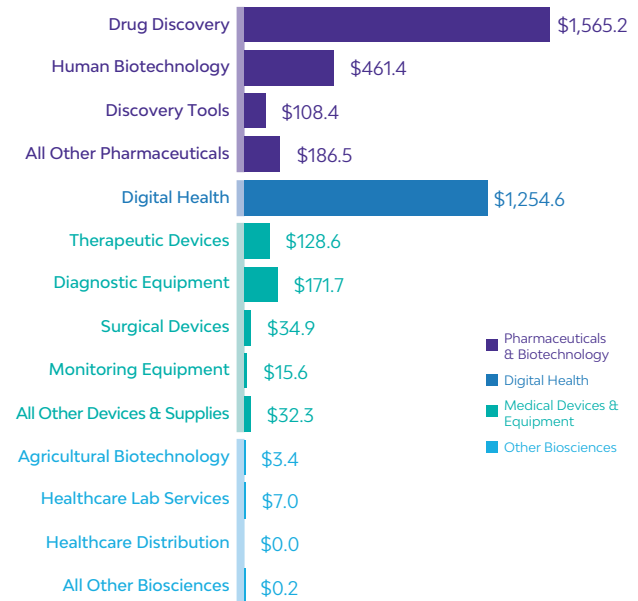
### Bioscience-Related Venture Capital Investments

\$ Millions, 2021-2025



### Bioscience-Related Venture Capital Investments by Segment

\$ Millions, 2021-2025

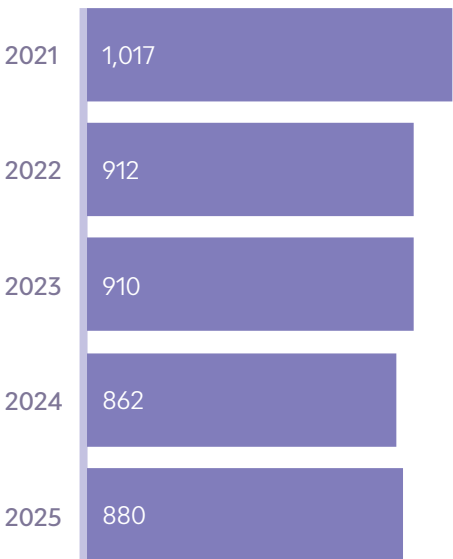


# Maryland

## BIOSCIENCE PATENTS IN MARYLAND

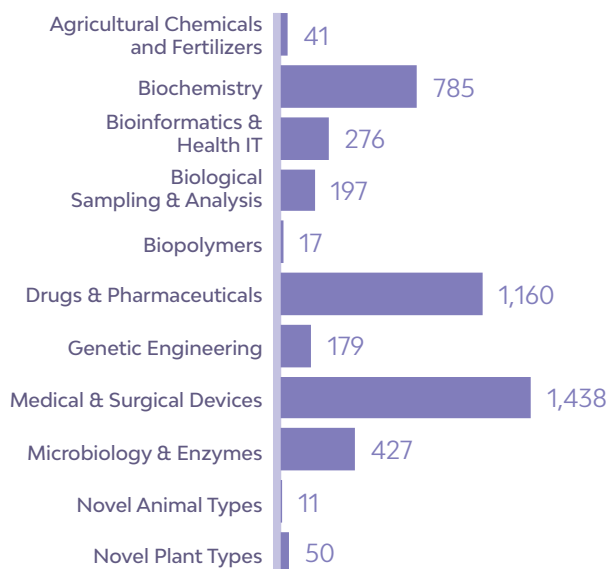
### Bioscience-Related U.S. Patents

2021-2025



### Bioscience-Related U.S. Patents by Segment

2021-2025



## SOURCE NOTES

**Employment, Establishments and Wages:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced by Lightcast (Datarun 2026.3).

**Academic R&D Expenditures:** National Science Foundation (NSF), National Center for Science and Engineering Statistics (NCSES), Higher Education Research and Development (HERD) Survey.

**NIH Funding:** National Institutes of Health, NIH Awards via the NIH RePORT portal.

**Venture Capital:** PitchBook Data, Inc.

**Patents:** U.S. Patent & Trademark Office data from the Clarivate Derwent Patent Search patent analysis database.

*For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report.*