

## Oregon



Oregon's growing bioscience industry reached over 13,500 jobs in 2012 across 802 state business establishments. State bioscience companies have increased employment by 9.2 percent since 2007, a period which includes the deep national recession and early years of the recovery. Oregon is emerging in several bioscience areas with job growth in four of the five major subsectors from 2007 to 2012. The state's research, testing, and medical labs subsector has grown particularly fast in recent years, increasing employment by 33 percent. Oregon's research universities are especially focused in the biosciences relative to other fields with their \$456 million in bioscience academic R&D in 2012 accounting for 67 percent of all academic research compared with 61 percent for the national average. In 2013, NIH funding to Oregon institutions totaled nearly \$287 million which translates into an above-average rate of funding per capita.

## Bioscience Performance Metrics

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

| Metric                                                               | Oregon    | United States | Quintile |
|----------------------------------------------------------------------|-----------|---------------|----------|
| <b>Bioscience Industry, 2012</b>                                     |           |               |          |
| Bioscience Industry Employment                                       | 13,556    | 1,619,746     | III      |
| Bioscience Industry Location Quotient                                | 0.68      | n/a           | IV       |
| Bioscience Industry Establishments                                   | 802       | 73,088        | IV       |
| <b>Academic Bioscience R&amp;D Expenditures, FY 2012</b>             |           |               |          |
| Bioscience R&D (\$ thousands)                                        | \$456,391 | \$38,139,876  | III      |
| Bioscience Share of Total R&D                                        | 67%       | 61%           | II       |
| Bioscience R&D Per Capita                                            | \$116     | \$119         | II       |
| <b>NIH Funding, FY 2013</b>                                          |           |               |          |
| Funding (\$ thousands)                                               | \$286,842 | \$22,293,255  | II       |
| Funding Per Capita                                                   | \$73      | \$70          | II       |
| <b>Bioscience Venture Capital Investments, 2009–13 (\$ millions)</b> | \$57.3    | \$49,401.7    | IV       |
| <b>Bioscience and Related Patents, 2009–13</b>                       | 1,230     | 100,238       | III      |

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile.

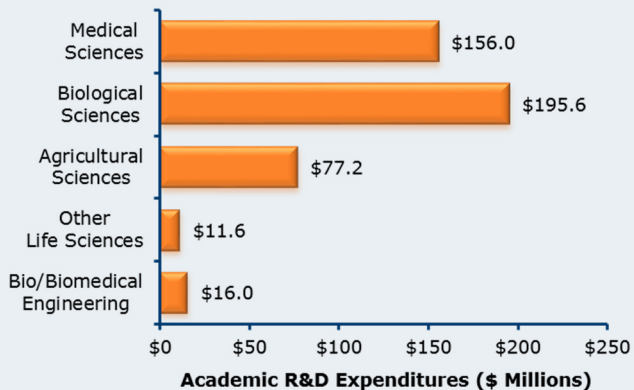
For source notes, see end of State Profile.

| Industry Subsector                                 | Oregon    |                  | United States |                  |
|----------------------------------------------------|-----------|------------------|---------------|------------------|
|                                                    | 2012      | 2007–2012 Change | 2012          | 2007–2012 Change |
| <b>Agricultural Feedstock &amp; Chemicals</b>      |           |                  |               |                  |
| Establishments                                     | 36        | 20.0%            | 1,772         | 5.2%             |
| Employment                                         | 467       | -16.6%           | 76,404        | -1.0%            |
| Location Quotient                                  | 0.50      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 19.1      |                  | 18.1          |                  |
| Total Employment Impact                            | 8,907     |                  | 1,382,637     |                  |
| Average Annual Wage                                | \$56,886  | 14.3%            | \$75,828      | 14.2%            |
| <b>Bioscience-Related Distribution</b>             |           |                  |               |                  |
| Establishments                                     | 336       | -2.1%            | 36,793        | 1.4%             |
| Employment                                         | 4,301     | 3.5%             | 442,016       | -3.9%            |
| Location Quotient                                  | 0.82      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 2.9       |                  | 2.7           |                  |
| Total Employment Impact                            | 12,276    |                  | 1,199,015     |                  |
| Average Annual Wage                                | \$59,745  | 25.8%            | \$85,188      | 11.5%            |
| <b>Drugs and Pharmaceuticals</b>                   |           |                  |               |                  |
| Establishments                                     | 39        | 8.3%             | 3,057         | 12.0%            |
| Employment                                         | 875       | 9.9%             | 284,331       | -10.9%           |
| Location Quotient                                  | 0.25      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 8.3       |                  | 9.9           |                  |
| Total Employment Impact                            | 7,302     |                  | 2,673,265     |                  |
| Average Annual Wage                                | \$46,397  | 22.3%            | \$106,576     | 13.9%            |
| <b>Medical Devices and Equipment</b>               |           |                  |               |                  |
| Establishments                                     | 119       | 10.2%            | 7,235         | 12.0%            |
| Employment                                         | 4,165     | 1.9%             | 349,432       | 1.4%             |
| Location Quotient                                  | 0.97      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 3.9       |                  | 3.9           |                  |
| Total Employment Impact                            | 16,039    |                  | 1,318,459     |                  |
| Average Annual Wage                                | \$65,098  | 4.6%             | \$75,695      | 10.7%            |
| <b>Research, Testing, and Medical Laboratories</b> |           |                  |               |                  |
| Establishments                                     | 273       | 36.0%            | 24,231        | 31.0%            |
| Employment                                         | 3,748     | 32.8%            | 467,563       | 9.7%             |
| Location Quotient                                  | 0.65      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 2.6       |                  | 2.7           |                  |
| Total Employment Impact                            | 9,645     |                  | 1,284,196     |                  |
| Average Annual Wage                                | \$67,372  | 5.5%             | \$91,248      | 15.9%            |
| <b>Total Bioscience Industry</b>                   |           |                  |               |                  |
| Establishments                                     | 802       | 11.8%            | 73,088        | 11.4%            |
| Employment                                         | 13,556    | 9.2%             | 1,619,746     | -0.4%            |
| Location Quotient                                  | 0.68      |                  | n/a           |                  |
| Direct-Effect Employment Multiplier                | 4.2       |                  | 4.9           |                  |
| Total Employment Impact                            | 56,552    |                  | 7,857,572     |                  |
| Average Annual Wage                                | \$62,538  | 12.6%            | \$88,202      | 12.8%            |
| <b>Total Private Sector</b>                        |           |                  |               |                  |
| Establishments                                     | 126,863   | 1.0%             | 8,699,564     | -0.5%            |
| Employment                                         | 1,370,784 | -5.9%            | 111,137,206   | -3.1%            |
| Average Annual Wage                                | \$43,685  | 11.5%            | \$49,130      | 11.1%            |

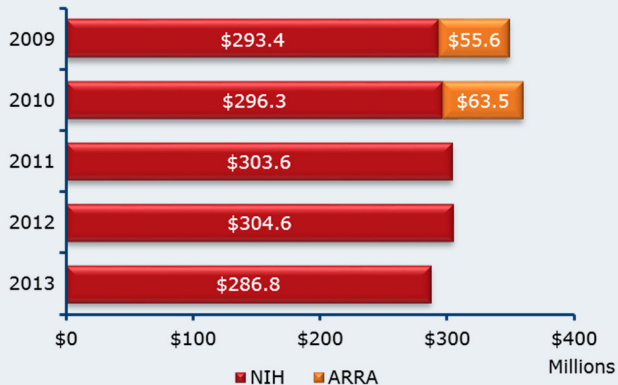
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

## Bioscience Research in Oregon

**Bioscience Academic R&D Expenditures, FY 2012**

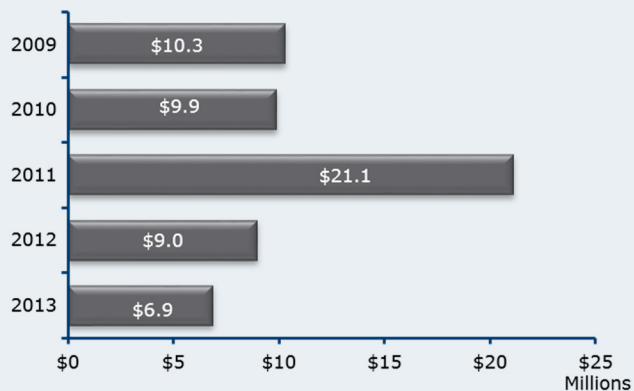


**NIH Awards, 2009–2013**

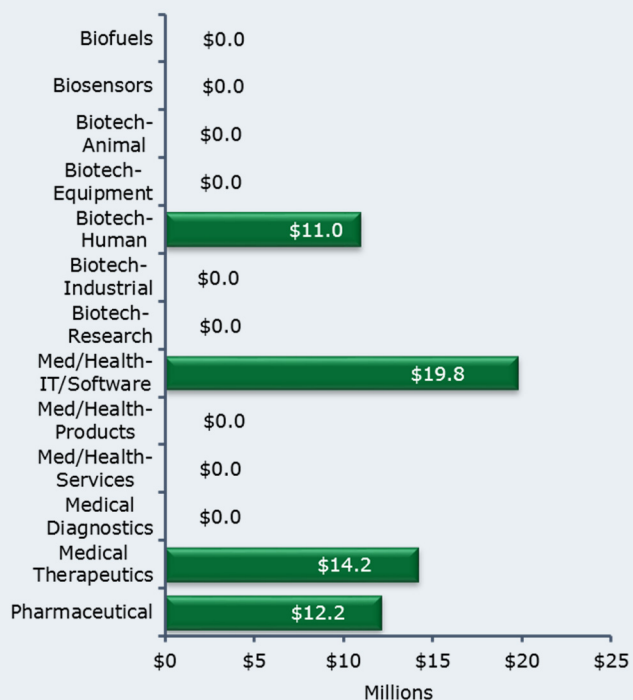


## Bioscience Venture Capital in Oregon

**Bioscience-Related Venture Capital Investments, 2009–2013**

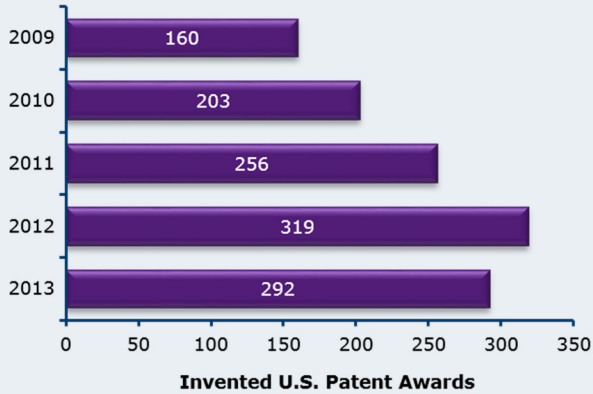


**Bioscience-Related Venture Capital Investments by Segment, 2009–2013**

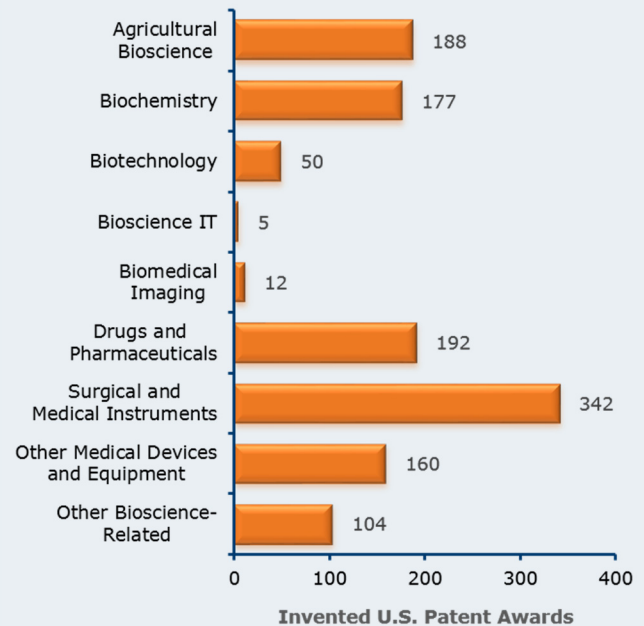


## Bioscience Patents in Oregon

**Bioscience-Related Patents, 2009–2013**



**Bioscience-Related Patents by Segment, 2009–2013**



### Source Notes

**Employment, Establishments, and Wages:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced file from the IMPLAN Group, LLC.

**Employment Multipliers:** IMPLAN Group, LLC state-level Input/Output models.

**Academic R&D Expenditures:** National Science Foundation (NSF) Higher Education Research and Development (HERD) Survey.

**NIH Funding:** National Institutes of Health, *NIH Awards by Location & Organization* (summary information within RePORT database), and NIH-managed funding for FY 2009 and FY 2010 from the American Recovery and Reinvestment Act (ARRA) website.

**Venture Capital:** Thomson Reuters Thomson ONE venture capital database.

**Patents:** U.S. Patent & Trademark Office data from Thomson Reuters Delphion Patent Analysis Database.

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