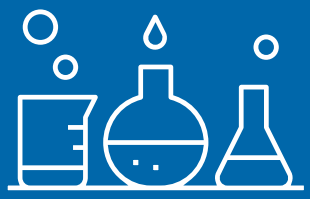
THE INNOVATIVE BIOPHARMACEUTICAL INDUSTRY'S SUPPORT FOR STEM EDUCATION IN:

CONNECTICUT



The Biopharmaceutical Industry's Sustained Commitment to Inspiring and Advancing Tomorrow's STEM Workforce

A high-skilled technical workforce that is proficient in science, technology, engineering, and mathematics (STEM) is increasingly important to sustained economic growth and U.S. global competitiveness. However, as the U.S. continues to lag behind other countries in terms of STEM literacy and expertise, there are legitimate concerns in the nation's ability to produce enough qualified workers to meet the demands of the global knowledge-driven, STEM-intensive economy and to develop workers with the relevant skills needed for the jobs of the future. ***Inspiring and developing the next generation of STEM talent is critical to the economic success of Connecticut.***

STEM talent is especially important to the success of the nation's biopharmaceutical industry, one of the economy's most innovative sectors employing more than five times the level of STEM workers compared with the overall U.S. economy. **In Connecticut, the biopharmaceutical industry directly employs 8,963 and has a total economic impact of more than 35,400 state jobs and $9.0 billion in total economic output.**[1]

Connecticut will need to fill nearly 132,000 STEM jobs by 2026. Although an analysis of a series of STEM education indicators finds that Connecticut students generally rank highly in terms of their proficiency in STEM, opportunities for improvement remain.

To help inspire and develop the next generation of STEM workers, the innovative biopharmaceutical industry supports 10 programs in Connecticut and 10 programs nationwide.

Number of STEM Programs Supported by the Biopharmaceutical Industry in Connecticut[2]	**10**
Number of National STEM Programs Open to CT Students and Teachers	**10**

Projected STEM jobs to Fill in CT by 2028[3]

131,880

National Assessment of Educational Progress State Ranking for CT Students[4]

	4th Grade	8th Grade
Math	**13**	**9**
Science	**26**	**25**

Share of Graduating CT High School Students Interested in STEM Major or Career[5] (U.S. = 48%)	**47%**

Biopharmaceutical Industry Economic Footprint in Connecticut[6]

8,963 Direct Jobs	**$9.0 B** Total Output

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Biopharmaceutical Industry-Supported STEM Education Programs in Connecticut

Boehringer Ingelheim (BI), through the BI Cares Foundation, supports a variety of activities throughout Connecticut related to advancing STEM education:

- **Partners in Science,** an annual program where students engage with BI R&D scientists, enjoy lectures from researchers in a variety of STEM careers, and tour different types of laboratories to learn about STEM careers in the pharmaceutical industry.
- The **BI Cares Foundation Life Science Awards,** which recognize innovative student ideas that improve patient lives, are presented at the annual Connecticut Innovation Convention. As part of this event, the BI Cares Foundation provides financial support and BI employees volunteer as judges and mentors at both local and statewide levels of the competition.
- Annual financial support for **Junior Achievement of Western CT,** as well as volunteering activities where BI employees teach lessons at the Danbury STEM Academy to cultivate an interest in STEM learning. BI also recently added a Job Shadow program where 8th graders from the STEM Academy visit the BI campus for a day and participate in hands-on team activities.
- **Broadening Access to Science Education (BASE) Camp**, a two-week program held at Fairfield University where female high school students from Bridgeport can explore science careers. On one day of the camp, the focus is drug discovery and students tour laboratories in BI's R&D building and have lunch with female scientists who answer questions they may have about STEM and STEM careers.
- Financial support for the interactive **Genomics program at the Connecticut Science Center** in Hartford, as well as other activities that encourage BI employee volunteering.
- **BI Engineering Day**, an annual event that welcomes high school students from Danbury, Ridgefield, Bethel, and Brookfield to BI's Ridgefield campus, where they tour facilities and are introduced to a variety of engineering jobs at pharmaceutical companies like BI.
- **Pharmacists Across BI** (PhAB), an active Business Resource Group that participates in programs at UConn School of Pharmacy and other pharmacy schools to show students the range of career opportunities in the biopharmaceutical industry.
- An **annual field trip** for Western CT students to witness an entertaining performance of scientific principles through hands-on demonstrations featuring student volunteers. Additionally, funding provides transportation and tickets for underrepresented area students who would otherwise not have access to such an inspiring STEM education program.
- **CPEP**, an innovative nonprofit program that leads underserved students through innovative hands-on curricula to develop 21st Century skills, including activities ranging from 3D printing to developing and marketing a mobile app. The BI Cares Foundation and BI employees are active in this program, providing financial support and serving as mentors to many participating students.

The **GlaxoSmithKline Science in the Summer** program provides high-quality STEM experiences to students who would otherwise lack access, especially during summer breaks when school is out of session. In Connecticut, the program is available through a partnership with the Discovery Museum in Bridgeport.

Industry-Supported STEM Education Programs Nationwide

With an emphasis on student engagement, teacher development, and dynamic learning opportunities, PhRMA members **Amgen, AstraZeneca, Bayer, Genentech, GSK, and Johnson & Johnson** also support 10 STEM education programs nationwide. Read more about these programs here.

1 *The Economic Impact of the U.S. Biopharmaceutical Industry: 2017 National and State Estimates, PhRMA and TEConomy Partners, December 2019.*
2 *PhRMA-TEConomy "The Biopharmaceutical Industry's Sustained Commitment to Inspiring and Advancing Tomorrow's STEM Workforce" 2020.*
3 *TEConomy's Analysis of Projections Managing Partnership Occupational Employment Projections for 2018-2028. Projections data reflect the 2016-26 period for the following states: AL, AZ, CT, KS, KY, MA, NM, OK, TX, VT, WA, WV.*
4 *U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019 Mathematics Assessment and 2015 Science Assessment.*
5 *Percentage of ACT-Tested High School Graduates Scoring Expressing Interest in STEM Majors, Occupations, and/or Activities; ACT: The Condition of STEM 2017 State Profiles.*
6 *The Economic Impact of the U.S. Biopharmaceutical Industry: 2017 National and State Estimates, PhRMA and TEConomy Partners, December 2019.*