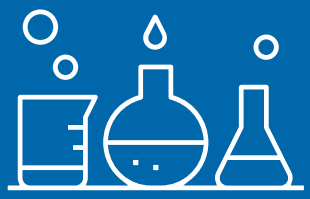
THE INNOVATIVE BIOPHARMACEUTICAL INDUSTRY'S SUPPORT FOR STEM EDUCATION IN:

INDIANA



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 Indiana.***

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 Indiana, the biopharmaceutical industry directly employs 24,658 and has a total economic impact of nearly 140,000 state jobs and $55.6 billion in total economic output.**[1]

Indiana will need to fill more than 167,000 STEM jobs by 2028. Although an analysis of a series of STEM education indicators finds that Indiana 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 8 programs in Indiana and 10 programs nationwide.

Number of STEM Programs Supported by the Biopharmaceutical Industry in Indiana[2]	**8**
Number of National STEM Programs Open to IN Students and Teachers	**10**

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

167,490

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

	4th Grade	8th Grade
Math	**7**	**9**
Science	**10**	**20**

Share of Graduating IN High School Students Interested in STEM Major or Career[5] (U.S. = 48%)	**52%**

Biopharmaceutical Industry Economic Footprint in Indiana[6]

24,658 Direct Jobs	**$55.6 B** Total Output

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Biopharmaceutical Industry-Supported STEM Education Programs in Indiana

Eli Lilly and Company and the Lilly Foundation support a variety of STEM education programming throughout Indiana:

- **Lilly Experience for Teachers in STEM (LETS),** a unique event conducted annually by the Lilly Foundation and the Indiana STEM Resource Network, a partnership of public and private higher education institutions, K-12 schools, governments, and businesses. This two-day program brings together Lilly employees and teachers from throughout Central Indiana to discover new ways to provide students with the best opportunities to realize potential careers in STEM.
- **Chemistry is a Blast!** Presentations, where Lilly scientists provide students at K-12 schools throughout the state with educational, safe, exciting, and participatory chemistry experiments tailored based on the ages of the children.
- **STEM Partners,** an innovative program that connects talented teachers with experienced STEM professionals to implement hands-on, minds-on curriculum. Employees from Eli Lilly and Company, and IU Health are invited to volunteer as "STEM Partners" for the duration of a school year. These STEM Partners work one-on-one with a teacher for 4-6 hours per month to create and enrich the STEM learning environment in the classroom.
- **JobSpark,** an effort to provide 8th grade students from across Indiana with experiential learning experiences that are designed by industry teams, with a focus on future workforce needs. JobSpark is held at the Indiana State Fairgrounds and is led by Junior Achievement of Central Indiana, with support from educators and industry partners such as Lilly.
- **The Indiana Robotics Championships,** among the largest robotics state championship in the country. Lilly provides financial support for this event, where more than 360 teams of students in grades K-12 compete for an opportunity to advance to the World Championship.
- **Indianapolis STEM Summer Camps,** which encourage students to explore STEM fields. More than 1,300 students participate in these camps, which the Lilly Foundation supports through funding for operational and programmatic work. Many of these students live in Indianapolis' urban neighborhoods and are from underserved and underrepresented communities.
- **Indianapolis High School Academies,** where Lilly also plays a financial and advisory role in support of Indianapolis Public Schools' vision that 100% of IPS high school students will graduate on-time and prepared for their next steps, whether it's enrollment in post-secondary education, enlistment in the armed services, or employment at a livable wage. Lilly's unique expertise and interest in growing STEM careers led to the selection of two high schools implementing pathway programs around fields such as advanced manufacturing, engineering, logistics, among others.

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 Indiana, the program is offered through a partnership with Science Central in Fort Wayne.

Industry-Supported STEM Education Programs Nationwide

With an emphasis on student engagement, teacher development, and dynamic learning opportunities, PhRMA members **Amgen, AstraZeneca, Bayer, Genentech, 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.*