



# AMGEN® Biotech Experience

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## Scientific Discovery for the Classroom

*"I wouldn't have known about this field, how stimulating and enjoyable it is, without having sampled the life of a scientist through the biotech labs used by the Amgen Biotech Experience."*

—Audrey Izuhara, research technician and former ABE student

### Bringing Science to Life

Science, technology, engineering and mathematics (STEM) are critical to the worldwide economy and are a core of many industries. Innovative STEM education programs will maximize students' learning of knowledge and skills that can be applied to these fields. The Amgen Biotech Experience (ABE) gives students the opportunity to gain hands-on experience with many of the same techniques that biotechnology researchers use to produce cutting-edge human therapeutics.

ABE is an innovative science education program that introduces students to the importance of scientific discovery through a molecular biology learning experience that links core science concepts to real-world applications. The program provides secondary school teachers with the curriculum, professional development and lab equipment and supplies to engage students in this rigorous science education program.

## Enriching Students' Lives in the Classroom and Beyond

Through ABE, students cultivate critical skills—including analysis, synthesis, evaluation and problem-solving—that will serve them throughout their lives, whether they choose to pursue a career in science or work in an entirely different field.

ABE began in Los Angeles, California, over 30 years ago through a unique collaboration of Amgen scientists and science educators with the vision to bring the excitement of biotechnology to secondary school students. The program has since developed a robust curriculum and expanded to multiple Amgen communities worldwide. The ABE Program Office based at Education Development Center (EDC), a global nonprofit organization with deep experience and expertise in science education, provides leadership and support to strengthen the program worldwide.

To date, the Amgen Foundation has committed more than \$42 million toward the ABE program, making this opportunity possible for hundreds of thousands of students and thousands of teachers worldwide.



### Amgen Foundation

The Amgen Foundation seeks to advance excellence in science education to inspire the next generation of innovators, and invest in strengthening communities where Amgen staff members live and work. To date, the Amgen Foundation has committed \$375 million to nonprofits dedicated to impacting lives in inspiring and innovative ways. In addition to the Amgen Biotech Experience, the Amgen Foundation brings the excitement of discovery to the scientists of tomorrow through several signature programs, including Amgen Scholars and LabXchange. For more information, visit [www.AmgenInspires.com](http://www.AmgenInspires.com) and follow us on [www.twitter.com/amgenfoundation](https://www.twitter.com/amgenfoundation).

### EDC

Education Development Center (EDC) is a global nonprofit organization headquartered in Waltham, Massachusetts. EDC's mission is to create learning opportunities for people around the world, empowering them to pursue healthier and more productive lives. EDC works with public-sector and private partners, harnessing the power of people and systems to improve education, health promotion and care, workforce preparation, communications technologies and civic engagement. Learn more at [www.edc.org](http://www.edc.org).

## Scientific Discovery for the Classroom

“We constantly have former students come back to tell us that they chose to major in science, biotech or related fields because of this experience.”

– Jim Mauch, High School Science Teacher

### Quick Facts

- In a typical year, ABE reaches approximately **90,000 students** and **1,500 teachers**
- Program curriculum, professional development, and all materials needed are provided free of charge
- Globally, the program has impacted **more than 900,000 students to date**
- By the end of 2023, ABE anticipates reaching **1,000,000 students** because of the Amgen Foundation's more than **\$42 million commitment** to the program
- ABE was given the highest designation of effectiveness in [WestEd's STEMworks](#) database of programs that meet high standards for quality and impact
- In partnership with Change the Equation, the Amgen Foundation's survey titled “[Students on STEM: More Hands-on, Real-World Experiences](#),” found that large majorities of teenagers like science and understand its value, but common teaching methods, such as teaching straight from the textbook, do not bring the subject matter to life in the same way hands-on, real-life experiences do
- Independent and rigorous [evaluation data](#) found that students exposed to ABE have significant and substantial learning in biotechnology and increased interest and confidence in doing science and biotechnology



### BIOTECHNOLOGY

Biotechnology has brought about the discovery and development of a new generation of human therapeutics. Advancements in both cellular and molecular biology have allowed scientists to identify and develop a host of new medicines for patients with serious illness. Biotechnology provides the tools and techniques for modern pharmaceutical research and drug development, and it is critical that future citizens are knowledgeable about this field.

### THE PROGRAM AND CURRICULUM

The ABE program integrates a curriculum that allows students to explore the steps involved in creating biotechnology therapies. Aligned with Next Generation Science Standards and the core biology curriculum, the program supports the larger goal of fostering scientific literacy. In addition to the curriculum and teacher professional development to understand the lab protocols and science, participating teachers receive a loaned kit, free of charge, with research-grade equipment and supplies that allow students to participate in advanced science laboratories.

### THE LABS AND MATERIALS

The ABE labs parallel some of the important steps taken by the biotechnology industry to develop medicines to treat a variety of diseases. The labs incorporate core technologies used by scientists in the discovery of human therapeutics, so that students will better understand the role of biotechnology and the potential impact of this industry on our future. In addition, by engaging in this program, students may be more motivated to understand the underlying science concepts and perhaps even pursue careers in science. In collaboration with the Amgen Foundation and ABE teachers, [LabXchange](#) has created a collection of pathways designed to enhance the ABE lab experience. The pathways are modular to allow you to mix and match concepts and practice with lab techniques in the way that best supports your students.

### LOCATIONS

ABE is currently available in the following regions: Australia, Canada, France, Germany, Hong Kong SAR, Ireland, Italy, Japan, Mainland China, the Netherlands, Singapore, Türkiye, United Kingdom, and multiple Amgen communities in the United States.

[View the ABE Program Site Map](#) and visit the [ABE Press Kit](#) for media resources, including logos, brochures, and photos

### Contact Us

**Program Inquiries:** Rebecca Lewis, Director, ABE Program Office, 617-969-7100 ext. 2935 or [rlewis@edc.org](mailto:rlewis@edc.org)

**Media Inquiries:** Laoise O'Murchú, Amgen Foundation, [lomurchu@amgen.com](mailto:lomurchu@amgen.com)