Building a talented regional workforce to sustain a world-class life sciences industry.
Our Purpose

Our mission is to build a sustainable life sciences workforce in the region through educational programs that engage and excite teachers, inspire and propel students, and illuminate the pathway from the classroom to careers.

Our Approach

- Support the integration of lab-based lessons in classrooms
- Increase student awareness of life sciences career opportunities
- Align higher educational programs with the needs of industry

Illuminating the Pathway from the Classroom to Careers
Our Funders

$100,000 - $200,000

MassBio
Massachusetts Biotechnology Council

$50,000 - $99,999

Thermo Fisher Scientific
Sanofi Genzyme
EMD Serono

$20,000 - $49,999

Vertex
Takeda
Sunovion
Corning
Bristol-Myers Squibb
$100K for 100 Cummings Foundation
Bayer
Millipore Sigma

$5,000 - $19,999

AstraZeneca
Tufts CTSI

In-Kind

miniPCR
Alexandria
I am proud to join a talented team whose commitment to providing high-quality education and workforce development programs has a significant impact on students, teachers, and the life sciences community. In 2018-19, we trained more teachers than ever before who in turn led authentic life sciences lab activities with approximately 15,000 high school students. We directly engaged nearly 1,100 students in college and career exploration experiences through visits to companies, tours of college campuses, talks by industry volunteers, and networking with mentors—all with a goal of expanding knowledge and interest in life sciences careers. We successfully launched our new ACCESS program that bridges biotech curriculum from middle to high school. Through our Life Sciences Employment Outlook and Life Sciences Workforce Conference, we are ensuring that academia has the critical information to train the future life sciences workforce.

I am excited to support MassBioEd as we grow and adapt our education and workforce programs to increase student curiosity and interest in the life sciences. Our successes are possible through the growing support of our 50 corporate partners. I invite you to look at all that our team has accomplished in 2018-19. Thank you to all who helped make the year a success!
BioTeach

Our BioTeach program supports middle and high school teachers as they bring inquiry-based biotechnology curriculum into classrooms. Free workshops introduce teachers to essential concepts in biology and biotechnology with specific laboratory-based curricula. We assist teachers with content acquisition, curriculum design, and preparation and execution of classroom activities. Teachers can earn professional development points, and in some cases, graduate credit towards an advanced degree through a partnership with Westfield State University.

- BioTeach trained 210 teachers representing 112 schools in the 2018-19 school year.
- 20 Workshops at MIT, Endicott College, Millbury Jr/Sr High School, and University of Massachusetts, Amherst—including our annual Summer Institute, a five-day intensive, residential program.
- 99% of participating teachers incorporate activities from BioTeach workshops into their classrooms.
- 92% of participating teachers report an increased confidence in their ability to execute lab activities in their classroom.

“It is important that teachers keep learning and improving their knowledge and skills. Being in the shoes of learners helps teachers identify with student learners.”

— Paul Kasili, Bunker Hill Community College
Engaging Schools

Lab Equipment & Supplies
Along with teacher training and mentoring, we provide grants for science equipment and supplies to public schools. We awarded 23 public schools with equipment and supplies in 2018-19. Our relationship with teachers and schools ensures that these investments are used to deliver BioTeach lab lessons and robust learning to the maximum benefit of students.

TOTE (Take Out Training & Equipment)
The TOTE program helps smaller schools to engage students in lab activities through our equipment lending program. In 2018-19, MassBioEd provided in-classroom support to five partner schools as they implemented multiple labs. A BioTeach mentor worked with teachers to model effective teaching strategies and introduce the equipment and curricula. As teachers in these schools acquire needed expertise, their schools are well positioned to receive equipment grants to independently implement labs in future years. This year, we impacted 350+ students through our TOTE program.

ACCESS (Aligned Curricular & Career Experiences for Secondary Science)
Our new ACCESS program works with life sciences teachers across grades 7-10 within a school or school district to build a community of practice to support integration of vertically aligned, hands-on life science lessons and college and career experiences. This program ensures that, over the course of 3-4 years, students in ACCESS partner schools will have many meaningful and relevant life sciences experiences. We reached 520 students in 2018-19 and are excited to bring on board additional school districts.

“I really enjoyed the exposure to this lab series and being given the knowledge for how to do this in my classroom and cheaply! It’s so important to make these connections with industry.”

— Gina Ellswan, Boston Latin School
College & Career Exploration Programs

Student learning is expanded upon through our college and career exploration programs that provide students with direct interaction with faculty at universities and employees at life sciences companies in Massachusetts, at no cost to participating schools.

These experiences expand awareness and understanding of the opportunities available in college science programs and the diverse spectrum of careers that exist within the life sciences industry.

- 1,082 students participated in College & Career Exploration Programs.

- 92% of participating students reported an increased interest in pursuing a career in the life sciences!

Not only were the labs extremely engaging and relevant to the work of the company, but all of the employees were real. They provided great advice and made the science so interesting. Thank you for this opportunity!

— Student, Innovation Academy Charter School

“I was able to gain a wider view on how people in STEM do their jobs. My favorite part of the day was being able to meet new people and engage in biotechnology activities.”

— Student, Match Charter Public School
Inspiring Students

Career Exploration Day Host Organizations

- AbbVie
- Addgene
- Alnylam
- Amgen
- AstraZeneca
- Brammer Bio
- Bristol-Myers Squibb
- Corning Life Sciences
- Ironwood Pharmaceuticals
- MilliporeSigma
- Novartis (NIBR)
- Sanofi Genzyme
- The Broad Institute
- Vertex Pharmaceuticals
- Whitehead Institute

Biotech Futures Host Colleges

Northeastern University  Bridgewater State University  Endicott College  Westfield State University

Career Ambassadors Program

The MassBioEd Career Ambassadors program enables industry professionals and academics to share with students their experiences in the life sciences and the passion they bring to their work. Ambassadors share their stories through classroom talks, remote presentations and career panels. Volunteers from the following organizations presented at schools:

- New England Biolabs
- Fitchburg State University
- Sanofi Genzyme
- miniPCR

“My favorite part of the day was the patient advocacy section. I learned a lot about the day to day, and it really increased my interest in entering the commercial side of a pharmaceutical company.”

— Student, North Attleborough High School
Corporate Professional Development
MassBioEd offers courses to help professionals in the life sciences gain new knowledge and skills to support the work they do and advance their careers. In the 2018-19 school year, more than 220 individuals completed MassBioEd’s professional development courses.

Course Offerings included:
- Biotechnology Project Management
- Biotech 101: The Business of Biotech
- Making Transition to Leader/Manager
- Biotech 101: The Science of Biotech

Job Trends
Through job trend analysis, we provide a deeper understanding of the industry’s workforce needs and the skills and core competencies required to fill high trending jobs. Specialized briefs and our Annual Massachusetts Life Sciences Employment Outlook are published each year, along with our BioWages Guide, an affordable report for regional salary information.

Life Sciences Workforce Conference
We convened educators, industry professionals, and government officials at our annual conference in May 2019 to advance discussion on workforce development issues related to the life sciences industry. Over 220 participants engaged in conversations focused on effects of immigration law; specific technical competencies sought after in the fields of bioinformatics and biomanufacturing; soft skills essential to career success; and more.

With help from our Skills and Academic Advisory Groups, we continue to help colleges align their training programs to meet the needs of the industry and work towards expanding the talent pool of qualified workers.
Honorees

Outstanding Contributions

We are proud to honor high schools for exemplary educational programming in the life sciences with the Innovative School of the Year Award. Through a generous grant from the Boger Family Foundation, schools receive $5,000 to purchase lab equipment and supplies. Recent Awardees: Essex Technical Regional High School, 2017-18 and Innovation Academy Charter School, 2018-19.

Each year, three additional honorees are recognized for their outstanding contributions and advocacy for biotechnology education at our annual Champions for Biotechnology Education Awards Reception.

Josh Boger 2018-19 Innovative School of the Year Award
Innovation Academy Charter School in Tyngsborough, MA.
Champion for Biotechnology Education 2018 Individual Award
Dr. Udit Batra, Chief Executive Officer of MilliporeSigma
Champion for Biotechnology Education 2018 Organizational Award
Takeda Pharmaceuticals
Champion for Biotechnology Education 2018 Educator Award
Lindsey L’Ecuyer, Biotechnology Instructor at Andover High School

Beginning in the fall of 2019, the Henri A Termeer Educational Grant will recognize a Teacher and a Student with a $2,500 award to be used to further their education in the life sciences.
Thank You To Our Generous Event Sponsors

All proceeds from our three major events—Champions for Biotechnology Education Awards Reception, Life Sciences Workforce Conference, and MassBio Golf Classic—support our programs. Many thanks to our fantastic sponsors for their support.

$15,000+
Alexandria Real Estate Equities, Inc.
Janitronics Building Services, Inc.
J. Calnan & Associates
Third Rock Ventures
The Richmond Group

$10,000+
Thermo Fisher Scientific
MilliporeSigma
Sanofi Genzyme
Takeda Pharmaceuticals

$5,000+
Biogen
Biomed Realty Trust, Inc.
Corealis Pharma
Cummings Foundation
Ernst & Young
Eze Castle Integration
GE Healthcare
Vertex Pharmaceuticals

$1,000+
Alnylam Pharmaceuticals
Avista Pharmaceuticals
BDO
Boston Private
Cambridge Health Alliance
Occupational Health Program
Coretelligent
Corporate Traveler
Foley Hoag
J.C. Cannistraro
Massachusetts Life Sciences Center
MCPHS University
Middlesex Gases & Technologies
Mispro Biotech
Morgan Stanley
Northeastern University
Organogenesis
Praxis Precision Medicines
Propel Careers
Regal Press
Stratacuity

The Kraft Group
Translate Bio
University of Massachusetts, President’s Office
W.B. Mason
Worcester Polytechnic Institute

“We are proud to support MassBioEd in their mission to build a talented workforce through educational programs with our sponsorship of their high-quality events.”

— Christine Lindenboom
Vice President, Investor Relations
& Corporate Communications,
Alnylam Pharmaceuticals
Our Team

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MassBioEd depends on support from corporate giving and individuals.

In 2018, for every $1 we spent on fundraising, $9 was raised!
We also generated revenue from our Corporate Professional Development courses and a commitment by MassBio to apply a percentage of its membership dues to support our mission.
These revenue sources fully offset our overhead and outreach expenses.
MassBioEd Total expenses were $1.35 million against $1.37 million in revenue.
How To Make A Difference.

Be A Life Sciences Education Supporter

- Host Students At Your Company
- Become a Career Ambassador
- Make A Tax-Deductible Donation

2018-19 Impact

- 110 Public High Schools
- 210 Educators
- 30 College & Career Exploration Events
- 15,000 Students (estimate)

Learn more about how to get involved at MassBioEd.org.
MassBioEd Foundation is a 501(c) (3) charitable non profit organization.

Learn more at MassBioEd.org