

ANNUAL REPORT

EDUCATE. CONNECT. INSPIRE

Fueling the Future of Life Sciences

2024



A MESSAGE FROM OUR CEO Sunny Schwartz

MassBioEd achieved significant milestones this past year, driving our mission to support students, career changers, and the life sciences sector. We're thrilled to highlight our progress and its impact.

We remain deeply committed to ensuring access for historically underrepresented youth and adults, opening doors to science education and life sciences careers. Through strategic partnerships, we continue to connect well-trained talent with life sciences employers.

Notably, our innovative Life Sciences Apprenticeship Program now includes a Pre-Apprenticeship track, building foundational skills for success. An impressive 89% of our apprentices are still thriving in life sciences roles two years post-placement—outperforming industry norms. Graduates see an average 55% wage increase compared with pre-program, reaching \$30.64 per hour.

In 2024, our College to Career initiative reached over 500 public college students, showcasing exciting life sciences career paths through expos and workshops. The Life Sciences Career Hub also launched personalized career coaching services, meeting job seekers where they are and guiding their next steps.

Through BioTeach's ACCESS Program, we continue to deliver hands-on biotechnology lab experiences and career exploration to students in high-need school districts. This year, BioTeach staff reached 14,000 students with hands-on labs and through teacher training and spent 180 days in ACCESS schools. We also piloted our new Access Biotechnology program for high school upperclassmen, inspiring them to pursue STEM in college.

Looking forward, **our dedication to empowering educators, inspiring learners of all ages, and fostering inclusive life sciences careers is stronger than ever.** We will continue to strengthen partnerships and prepare the next generation of leaders, driving transformative health advancements.

Our progress is made possible by the invaluable contributions of our partners, volunteers, and dedicated staff. Thank you for your partnership as we continue to build a skilled and vibrant life sciences workforce together!

WITH GRATITUDE,

SUNNY SCHWARTZ

As we reflect on 2024, I am proud to share the significant strides MassBioEd has made in advancing its mission to build a well-trained life sciences workforce across Massachusetts. This year has brought continued growth, innovation, and collaboration—hallmarks of our community and the industry we serve.

Thanks to the dedication of our staff, educators, industry partners, and supporters, MassBioEd continued to expand its impactful programming. From delivering hands-on biotechnology lab experiences to students in high-need school districts, supporting adult learners through our Career Hub and apprenticeship programs, and training incumbent workers through Professional Training Courses, we have worked tirelessly to ensure that opportunities in the life sciences are accessible to all.

As we look ahead, we do so with great optimism. MassBioEd remains deeply committed to preparing the next generation of scientists, technicians, and leaders. Together, we are not just preparing individuals for careers—we are preparing them to shape the future of healthcare, discovery, and economic opportunity.



LAUREN CELANO | MassBioEd Board Chair



OUR PURPOSE

MassBioEd's programs help individuals find their way into strong, financially secure careers by fostering science literacy in students, mentoring teachers, and helping adults gain access into the life sciences.

Developing a strong life sciences workforce is central to our mission, focusing on engaging educators, inspiring students in grades 6-12, illuminating careers for college students and adults, and building the skills of the current workforce.

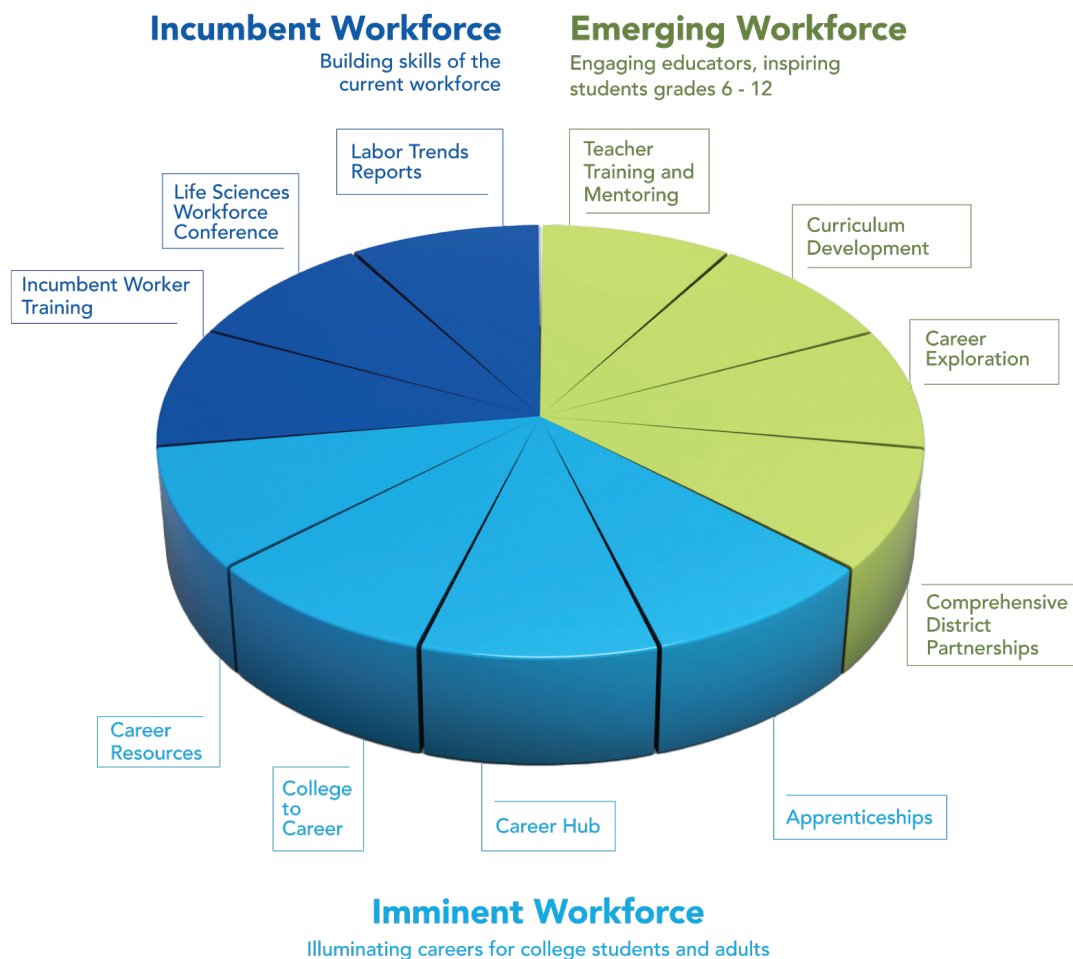
We are committed to addressing the following issues:

- Students are underprepared in science and unaware of career opportunities in the industry.
- Teachers are underprepared or under-supported to provide lab-based lessons to students.
- Demand for skilled workers continues to outpace supply.
- Individuals from underserved and diverse communities have historically been left out of the life sciences industry's growth.

OUR APPROACH

MassBioEd strengthens the life sciences workforce through thoughtful programs and partnerships.

Our work supports the emerging, imminent, and incumbent workforce through two primary programs, **BioTeach** and **BioTalent**.



BioTeach

- Biotech curriculum with career content and virtual activities freely accessible online
- Professional development training for teachers to support implementation of hands-on lab activities

- District-wide, multi-year program for grades 6-12 focused on high-need schools
- College and career programming for students
- Equipment loans for schools with mentoring support

BioTalent

- Apprenticeships for career-seeking adults
- Career awareness and engagement events for college students and adults
- Annual Life Sciences Workforce Conference

- Labor market information for educators and industry
- Life sciences and leadership development for industry professionals
- Career coaching

SCHOOL YEAR 2023-2024

- BioTeach staff are now trained to offer the **Bioscience Core Skills Institute (BCSI) microcredentials**: skills based, industry recognized, stackable credentials that demonstrate mastery and competency as an entry into career pathways without traditional degrees
- **106 teachers** attended 10 professional development workshops
- **80 teachers** attended multiple workshops
- **14,000 estimated students** impacted by teachers implementing labs and participation in hands-on activities and labs
- **102 schools** engaged in BioTeach programming
- **98% increase** in teacher confidence executing labs
- Held our week-long, intensive Summer Institute for teachers hosting **14 educators from 14 schools**, 8 earned graduate credit for the course
- Held **Student STEM Summer Exploration Internship**, which provided 20 high school students from Boston, Cambridge, Revere, Everett, Lynn, Malden, Watertown, and Winthrop with five weeks of hands-on laboratory and career exploration activities, in collaboration with the **LEAH Project** and **Biogen CoLab**

10

professional development workshops implemented

14,000

Estimated students impacted

100+

schools engaged in BioTeach programming

700

ACCESS students in 38 classrooms used BioScann in the classroom

“**The BioTeach workshops are the best training I have had in my 12 years as a teacher.**”

— EVERETT TEACHER

ACCESS brings teachers, administrators and scientists together from an entire school district, to provide partner districts with vertically aligned, hands-on life sciences lab lessons and career experiences for students in grades 6-10.

During the intensive program, teachers participate in workshops that provide training and practice with ACCESS lessons and equipment. They also receive in-school coaching and mentoring to incorporate ACCESS lessons and career awareness into existing curriculum. The embedded career awareness programming is delivered in conjunction with industry companies and volunteers, and includes the innovative web-based career curriculum, BioScann. Over the course of 3-4 years, students will have multiple life sciences experiences that build upon past lessons and science teachers build the robust community necessary for the program to continue with decreased support from BioTeach staff.

2023-2024

- 6,250 students served and 91 teachers trained in ACCESS
- 700 ACCESS students in 38 classrooms used BioScann in the classroom
- In ACCESS, 62% of students are economically disadvantaged, 57% speak a first language other than English, 76% are People of Color
- Introduced the new [Access Biotechnology Program](#), providing after-school science and career exploration opportunities for 10th-12th graders, with 68 participating students
- MassBioEd instructors spent 180 days in ACCESS schools



2024 ACCESS SCHOOLS

PILOT SCHOOLS

- Match Charter School *Boston*
- Innovation Academy Charter School *Tyngsborough*
- Boston Prep

DEERFIELD

- Frontier Regional School

CHELSEA

- Kelly Elementary
- Clark Avenue Middle
- Browne Middle
- Wright Science and Technology Academy
- Chelsea High

REVERE

- Revere High
- CityLab High
- Susan B. Anthony Middle
- Garfield Middle
- Rumney Marsh Academy

MALDEN

- Beebe
- Ferryway
- Forestdale
- Linden STEAM Academy
- Salemwood

STOUGHTON

- O'Donnell Middle School
- Stoughton High

APPRENTICESHIPS

The Life Sciences Apprenticeship Program provides accelerated, paid training for individuals to gain foundational knowledge and acquire industry-recognized skills, facilitating their entry into the industry.

2024

- Built, registered, and launched the Pre-Apprenticeship Program
- 48 new apprentices, pre-apprentices, and trainees enrolled in the program
- 76% were People of Color
- 62% transitioned to permanent employment
- 55% increase in wages for apprentices employed prior to beginning the program
- \$30.64 average post program wage
- 89% of apprentices retained for 2+ years on the job
- 23% of graduates have been promoted

WORKFORCE DEVELOPMENT

COLLEGE TO CAREER

2024

- 579 students from 18 schools learned about careers in the life sciences through events led by 172 volunteers
- 97% of students report having a better understanding of the industry after participating in an event

LIFE SCIENCE CAREER HUB

2024

- Served 980 adults through career awareness workshops
- Launched career coaching services and served 104 adults

“ This apprenticeship program has not only opened doors to a new career with boundless possibilities but has also allowed me to forge lifelong friendships. The guidance and mentorship provided by teachers, mentors, and staff have been invaluable in my personal and professional growth, and I am eager to continue learning and developing in the years to come.”

— LIFE SCIENCES APPRENTICE

Professional Training Courses

Our continued learning program offers a wide range of professional development courses that allow professionals to deepen their expertise and skills through intensive workshops and trainings. Offerings focus on project management, presentation and leadership skills, the business and science of biotech, and more.

290

enrollments across
22 courses

Life Sciences Workforce Conference

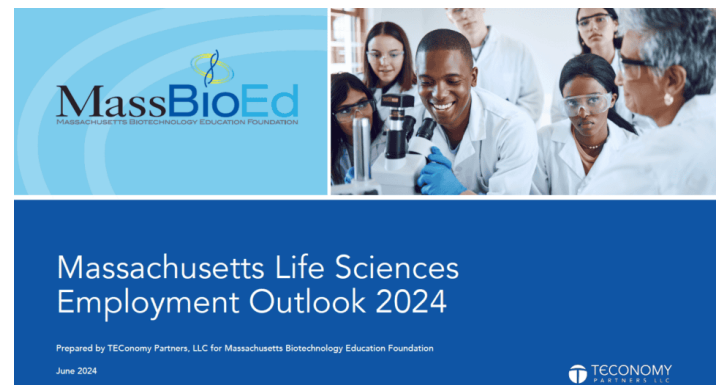
The Conference focuses on meeting hiring needs and exploring how industry, government, and academia can work together to build a strong life sciences workforce.

452

attendees

Employment Outlook

MassBioEd analyzes employment statistics and hiring demand in the life sciences for the purpose of forecasting job trends, identifying skills required for in-demand jobs, highlighting best practices in education and training programs, and serving as an effective guide on the talent and workforce needs for the industry.



2024 PARTNERS

Program Partners

Allston Brighton Community
Development Corporation

Association of Clinical Research Professionals

Biogen

BioMed Realty

Blueprint Medicines

Boynton Yards

Bridge Over Troubled Waters

Bridgewater State University

Compass Working Capital

Fields Corner Branch Library

Fitchburg State University

LabCentral

LabExchange

The LEAH Project

Massasoit Community College

MassBio

MilliporeSigma

miniOne

MiniPCR

New England Biolabs

Northeastern University

Pfizer

Phosphorex

Propel Careers

Southline Boston

Takeda

Tufts Center for Science Education

UMass Boston

Veolia Waste Management & Energy Services

Westfield State University

Worcester Polytechnic Institute

YMCA of Greater Boston

Apprentice Employers

AbbVie

Alnylam Pharmaceuticals

Blueprint Medicines

Bristol Myers Squibb

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MIT Lincoln Labs

Pfizer

Rentschler Biopharma

Sarepta Therapeutics

Seismic Therapeutic

Thermo Fisher Scientific

Vertex Pharmaceuticals



MASSBIOED CHAMPIONS FOR BIOTECHNOLOGY EDUCATION

2024 CHAMPIONS FOR BIOTECHNOLOGY EDUCATION AWARDS



CHAMPION FOR BIOTECHNOLOGY EDUCATION PUBLIC ADVOCATE AWARD
Secretary Lauren Jones
Secretary of Labor and Workforce Development,
Commonwealth of Massachusetts

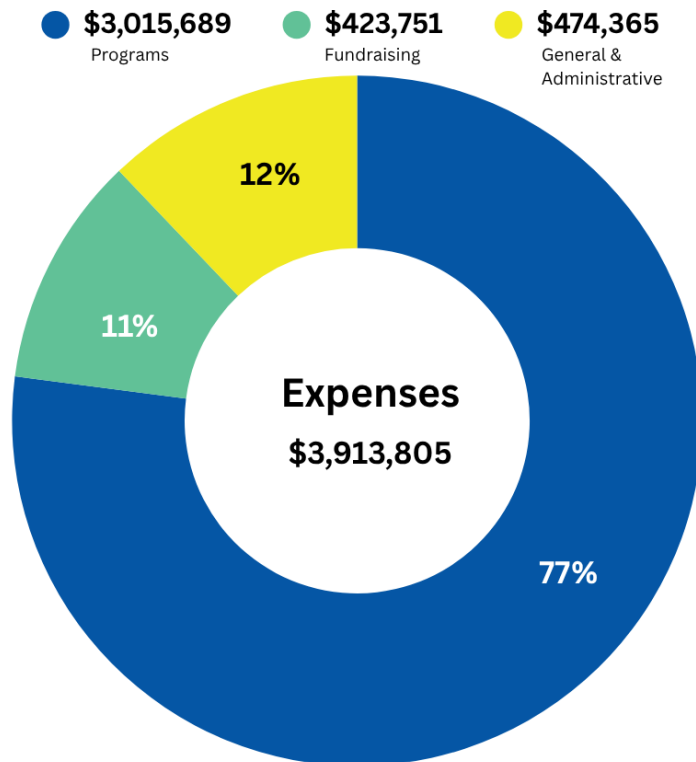
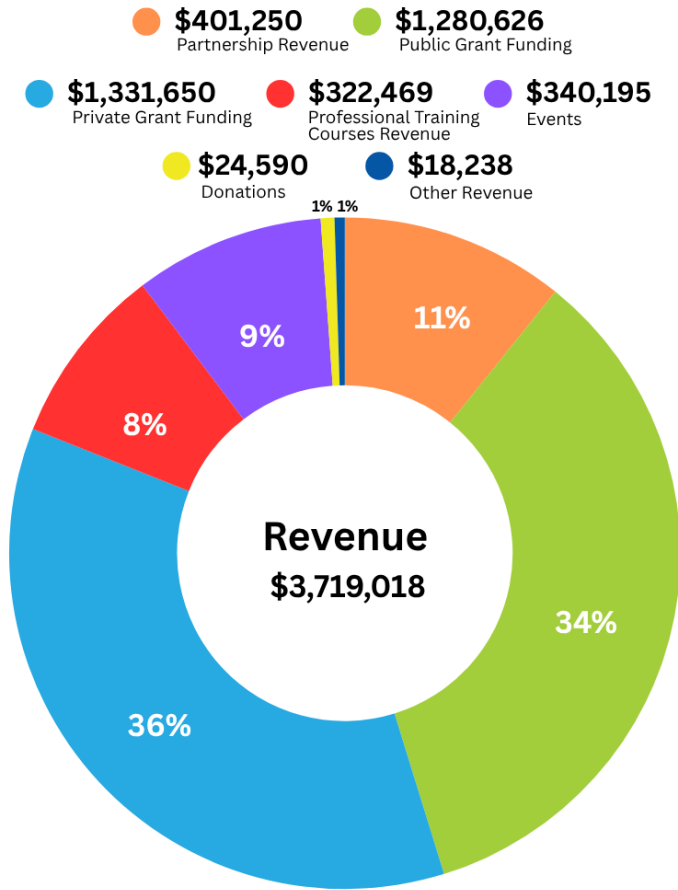
HENRI A. TERMEER STUDENT SCHOLARSHIP AWARD
Jiani Johnson
Harvard University

JOSHUA BOGER INNOVATIVE EDUCATOR AWARD
Anna Di Censo
Biology and Forensics Teacher,
Revere High School

CHAMPION FOR BIOTECHNOLOGY EDUCATION ORGANIZATION AWARD
Collegium Pharmaceutical



2024 FINANCIALS



THANK YOU TO OUR FUNDERS

\$100,000+



\$50,000 - \$99,999



\$20,000 - \$49,999



\$10,000 - \$19,999



\$5,000 - \$9,999

- Clark University
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- Greystar
- J. Calhan & Associates
- Kymera Therapeutics
- New England Biolabs
- Northeastern University
- Propel Careers
- Rasky Partners
- RMG Associates
- Sarepta Therapeutics
- Schrodinger
- The Termeer Foundation
- UCB

\$1,000 - \$4,999

- AAFCPAs
- AstraZeneca
- Blueprint Medicines
- Bridgewater State University
- Erin Colgan
- Insight Medical Consulting
- Lora Marden
- Massachusetts College of Pharmacy and Health Sciences
- Quincy College
- Seismic Therapeutic
- Stratacuity
- Suffolk University
- Vail Fucci Photography
- Wynter Duncanson

IN-KIND

Biogen | Boston University | Bulfinch | MilliporeSigma | miniPCR bio | New England Biolabs

THANK YOU TO OUR DONORS

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“ Outstanding from start to finish! Instructors were knowledgeable about the content and skills required to execute the labs and helped me experience what my students will be experiencing in a supportive environment! I am so thankful for MassBioEd and its incredibly talented staff for their continued commitment to delivering quality professional development to science educators in our state!”

— TEACHER WORKSHOP ATTENDEE

TEAM: STAFF

Sunny Schwartz
Chief Executive Officer

Allicia Bostick
Leader of Operations

John Brothers
Senior Director, Workforce Development Strategy

Myrria Hale
BioTeach Instructor & Career Mentor

Emily Harris
Manager of Workforce Programs

Naomi Jones
Senior Development Manager

Maggie Keeler
Senior Curricula Specialist

Corinne Kelly
Assistant Director, Workforce Programs

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Vice President of Advancement

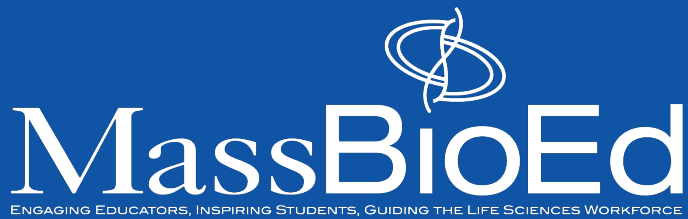
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ABOUT MASSBIOED

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 career.