

2020 Annual Report

**Building and sustaining a talented
and diverse life sciences workforce.**

Our Purpose

Massachusetts Biotechnology Education Foundation is dedicated to developing the region's life sciences workforce with a focus on expansion, opportunity, and diversity.

Since 2001, we have evolved into a unique link that connects students, educators, an industry professionals in programs that engage and excite teachers, inspire students, and illuminate pathways to careers and leadership in the industry.

The cornerstones of our work — BioTeach and BioTalent — are inter-connected programs that ignite student interest and cultivate a field of diverse experts committed to solving some of the world's most vexing challenges.



"MassBioEd is committed to supporting diversity and has actively developed new programs over the last year to diversify the life sciences workforce. I am proud of the work we are doing with our staff and Board to lead by example and reflect the rich diversity of our communities."

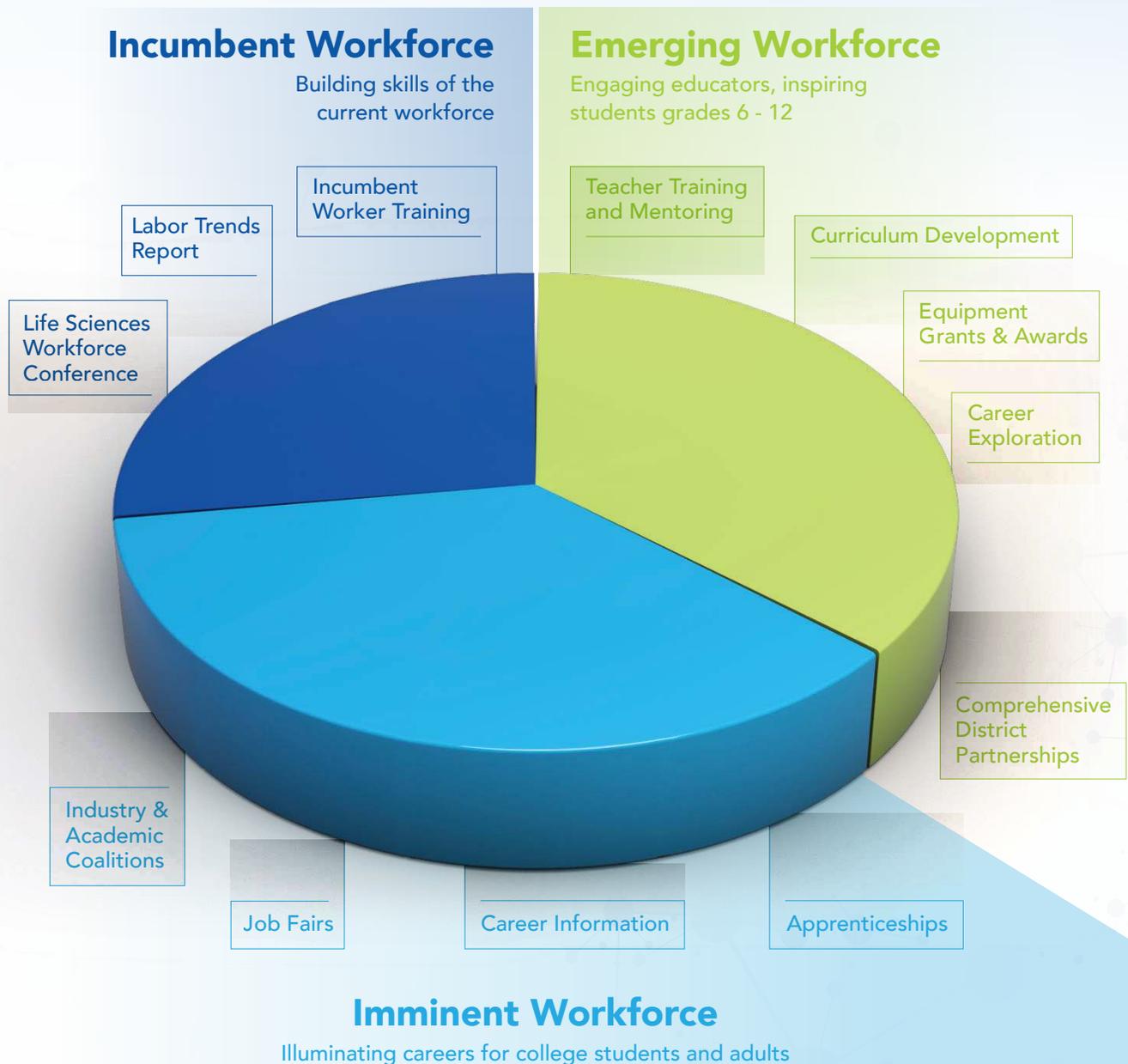
Lauren Celano

MassBioEd Vice Chair; Co-founder & CEO, Propel Careers



Our Approach

Our programs impact the emerging, imminent and incumbent workforce.



Through **BioTeach**, we support teachers and inspire middle and high school students through:

- Teacher professional development and resources
- One-on-one teacher mentoring
- Grant and award funding for equipment and lab supplies
- Laboratory and inquiry-based curricula
- Career awareness exploration experiences

Through **BioTalent**, we support career seekers and industry professionals through:

- Career awareness and engagement events for college students and adults
- Apprenticeships for non-traditional students
- Annual Life Sciences Workforce Conference
- Labor market information for educators and industry
- Biotech and soft skills training for industry professionals

Our Partners



\$100,000 +

Bristol Myers Squibb
MassBio

\$5,000 - \$9,999

Third Rock Ventures
Blueprint Medicines
Corcoran Jennison
Middlesex Gases & Technologies



\$50,000 - \$99,999

Sanofi Genzyme
Biogen
Thermo Fisher Scientific
EMD Serono

Pfizer
The Richmond Group
AIS



\$20,000 - \$49,999

Bayer Foundation
LabCentral Ignite
MilliporeSigma
One8Foundation
Collegium Pharmaceutical
Vertex Foundation
Sunovion Pharmaceuticals
Cummings Foundation
Corning Incorporated Foundation

Biomed Realty Trust
Corealis Pharma
J Calnan & Associates
Tufts CTSI
UCB
Propel Careers
AstraZeneca



\$10,000 - \$19,999

Alexandria Real Estate
Janitronics Building Services
Alnylam Pharmaceuticals
Takeda
Fisher Scientific
Amgen Foundation

\$1,000 - \$4,999

Foundation Medicine
LaVoie Health Sciences
Northeastern University
Stratacuity
Strategic Spaces
Massachusetts Life Sciences Center
Burning Glass Technologies
The Flanagan Foundation
RMG Associates

In-Kind

Alexandria Real Estate
New England Biolabs
MiniOne
MiniPCR

Supporting the Vision

A Message From Our Executive Director, Sunny Schwartz



"We know that educational opportunity levels the playing field. As Board Chair, I couldn't be prouder of the work MassBioEd has done in 2020 during the COVID pandemic to continue to educate the next generation of life scientists. The Board is excited to move forward to grow and create new avenues into meaningful, prosperous careers in the life sciences for diverse populations."



Christopher Murphy
MassBioEd Chair
Vice President & General
Manager, Viral Vector Services,
Thermo Fisher Scientific

Dear Partners,

What a year!

Who would have imagined that 2020 would have a worldwide pandemic, record unemployment, and long overdue racial reckoning? These three crises shine a spotlight on the important role of MassBioEd. Our mission to build and sustain a talented and diverse workforce has never been more important.

The life sciences have become the hope and inspiration of the world. Educating the next generation of scientists has never been so critical. The transition to remote learning challenged us all, but it also provided us with opportunities to learn new ways of educating and connecting with more individuals, providing a greater impact to our communities. This past school year, we trained 150 teachers who engaged over 10,000 students in biotechnology exploration. Over 900 students participated in our experiential career learning programs, and over 1,500 students were impacted through our equipment lending and district partnership programs.

Diversifying the life sciences workforce and highlighting opportunities for individuals affected by unemployment is key to our mission. This year laid the groundwork for a new initiative that will open career doors. In 2021 we are excited to launch a unique Life Sciences Apprenticeship Program to provide individuals an alternative, accelerated pathway into the industry through jobs that offer career growth and sustaining wages. We are also expanding our Aligned Curricular and Career Experiences for Secondary Science (ACCESS) program which supports underserved and high-need schools in educating students about life sciences and careers in the industry.

2021 marks MassBioEd's 20th anniversary! Please join us in celebrating our 20th year to ensure we leave no student behind in their discovery and learning of science, and we continue to open doors to opportunity for all in our community. Join us on social media, volunteer with our students, sign up for our newsletter or make a donation!

We know we cannot do this work without you, our community partners. Our donors, sponsors and volunteers make these important programs possible, and we thank each of you for your support and commitment.

A handwritten signature in black ink that reads "Sunny Schwartz".

Sunny Schwartz
Executive Director, MassBioEd

BioTeach Engaging Educators

Inspiring the Emerging Workforce

Emerging Workforce

Engaging educators, inspiring students grades 6 - 12

Teacher Training and Mentoring

Curriculum Development

Equipment Grants & Awards

Career Exploration

Comprehensive District Partnerships

BioTeach supports educators with innovative curricula, lab equipment and teaching materials that, when combined with intensive teacher professional development and on-site mentoring, delivers authentic science to middle and high school classrooms.

2019-2020 BioTeach Teacher Programs Impact:

- 147 teachers representing 83 schools participated in 16 free professional development trainings, impacting an estimated 10,500 students.
- Of those teachers, 130 received professional development points, 50 received lab supplies, and 22 earned graduate credit at Westfield State University.
- Two new labs were added to free, state-aligned curricula developed by BioTeach and 30 activities that could be done in less than 20 minutes were featured online.
- BioTeach continues to develop online digital content for teachers with LabXchange careers.



"Connecting with MassBioEd staff and other BioTeach teachers is honestly always the most useful component [of BioTeach professional development]. It was excellent to test materials before deciding to implement them into my own curriculum, and I am so appreciative you somehow made that happen in our homes."

– Teacher, June 26, 2020

BioTeach Engaging Schools

Inspiring the Emerging Workforce

Emerging Workforce

Engaging educators, inspiring students grades 6 - 12

Teacher Training and Mentoring

Curriculum Development

Equipment Grants & Awards

Career Exploration

Comprehensive District Partnerships

MassBioEd partners with underserved schools to ensure student access to hands-on labs and activities and the equipment needed to bring authentic science to the classroom. The on and off-site technical support mitigates barriers that prevent teachers from delivering laboratory activities and provides schools with the tools to sustain activities for years to come.

2019-2020 BioTeach School Programs Impact:

- Six schools participated in our Take-Out Training & Equipment (TOTE) program, impacting 1,071 students.
- Six schools participated in our Aligned Curricular and Career Experiences for Secondary Science (ACCESS) program, impacting 738 students from middle and high schools.
- Two schools received equipment grant and mentoring packages, totaling \$17,500 in lab equipment and supplies, and over \$12,000 in reagents and supplies was provided to the teachers who attended workshops.
- An additional \$400,000 in equipment from Massachusetts Life Sciences Center was leveraged with professional development and mentoring to nine Boston Public Schools.



"MassBioEd was able to build from the basics and provide opportunities for all of my students to engage in scientific inquiry. MassBioEd knew how to adapt lessons for students of all learning styles. For us to be able to perform the sophisticated labs we did is remarkable - it's a testament to the BioTeach Program and curriculum."

- Sarah Benat, Biology and Chemistry Teacher

BioTalent Engaging Students

Illuminating Careers for the Imminent Workforce

Imminent Workforce

Illuminating careers for college students and adults

Industry & Academic Coalitions

Job Fairs

Career Information

Apprenticeships



BioTalent illuminates the many pathways into life science careers through direct-to-student programs designed to inspire diverse middle school, high school, college and adult learners to explore life sciences careers. These experiential events in and outside of the classroom expose students to the wide array of opportunities in the industry by connecting them to professionals from academia and industry.

2019-2020 BioTalent Student Programs Impact:

- 208 students from eight schools visited seven schools, engaging with 76 industry volunteers.
- 234 students from 10 schools visited Endicott College and Northeastern University interacting with 40 volunteers.
- 134 students from six schools visited UMass Amherst and engaged with 42 industry volunteers representing 22 organizations.
- An additional \$400,000 in equipment from MLSC was leveraged with professional development and mentoring to nine Boston Public Schools.
- 87% of students who completed a survey reported an increased interest in pursuing a biotechnology degree in college, and 84% reported an increased interest in pursuing a career in the life sciences.



"My favorite part of the talk was when 'networking' was asked about. I was shocked to learn how vital of a soft skill it is to learn. I think this part of the presentation was a real eye opener."

- MassBay Community College Student, Career Ambassador Panel, April 2, 2020

BioTalent Engaging Professionals

Building the Skills of the Incumbent Workforce

Incumbent Workforce

Building skills of the current workforce

Incumbent Worker Training

Labor Trends Report

Life Sciences Workforce Conference



BioTalent conducts real time research on industry development, employer needs, and projected hiring trends, information utilized to build partnerships and initiatives that align traditional and non-traditional training with industry needs. Professional training courses help the current workforce build critical skills for continued success.

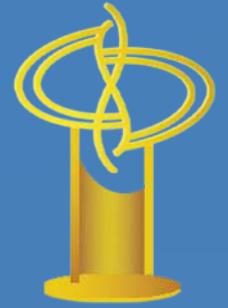
2020 Workforce and Training Programs Impact:

- Over 420 individuals downloaded the free MA Life Sciences Employment Outlook with 92% of survey respondents reporting the information was useful to their work.
- Over 270 participants of the 2020 virtual Life Sciences Workforce Conference engaged in discussions on hiring processes in the time of a global pandemic, work-based learning experiences, how colleges are adapting to deliver both informational and lab-based curriculum remotely, and the effects of recent policy changes on international students and employees.
- Our professional training courses had 387 enrollments; courses included biotechnology project management, leadership training, the business and science of biotechnology, and more.



"MassBioEd's training provided me with some interesting tools to begin applying in my daily work immediately. Especially in this new remote environment, it was helpful to see and learn from others how they are best navigating and engaging."
- Advanced Leadership Skills Participant, May 2020

Honoring Champions of Biotechnology Education



Henri A. Termeer Student Scholarship Recipient

Camila Wendorff, MassBay Community College and Framingham State University, 2020

Henri A. Termeer Educator Grant Recipient

Sarah Goldberg, New Mission High School, 2020
Laurie Jackson Grusby, Brockton High School, 2019

Champion Organization

Biogen, 2020
Thermo Fisher Scientific, 2019

Joshua Boger Innovative School of the Year Award

East Boston High School, 2019-2020



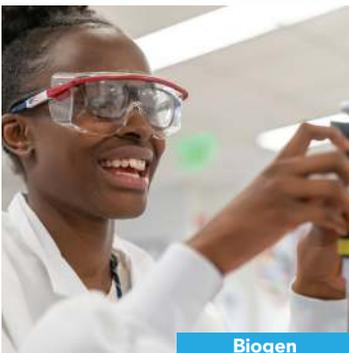
Camila Wendorff



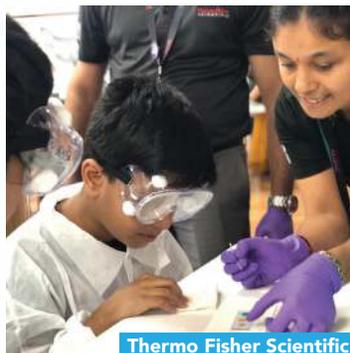
Sarah Goldberg



Laurie Jackson Grusby



Biogen



Thermo Fisher Scientific



East Boston HS

Committed Team and Board

Staff

Sunny Schwartz
Executive Director

Development and Communications

Marcie Laden
Director of Development and Marketing

Megan Schulz
Director of Communications and Events

Anneesa Uno
Administrative Services Coordinator

Education

Michelle Mischke
Director of Biotechnology Education Programs

Maggie Keeler
Assistant Director of Biotechnology Education Programs

Whitney Hagins
BioTeach Instructor and Curriculum Specialist

Jay Kulkarni
BioTeach Instructor and Curriculum Specialist

Andre Williams
BioTeach Instructor and Volunteer Coordinator

Workforce Development

Karla Talanian
Director of Talent and Workforce Development

Kretsy Mondesir
Manager of Career Exploration Programs

Germaine Palmer
Apprenticeship Program Coordinator

Board of Directors

Executive Committee

Chris Murphy, Chair
Vice President of Viral Vector Services,
Thermo Fisher Scientific

Lauren Celano, Vice Chair
Co-Founder and CEO, Propel Careers

Stacie Aarestad, Clerk
Partner, Foley Hoag

Michael Levy, Treasurer
Assurance Senior Manager, Ernst and Young LLP
Life Sciences

Directors

Joan Abrams, High School Educator

Bill Ciabrone, Executive Vice President
of Technical Operations, Sarepta Therapeutics

Ryan Cohlhepp, Senior Vice President,
R&D Strategy and Operations, Rheos Medicines

Renee Connolly, Global Head of Communications
and Business Markets & Services, MilliporeSigma

Robert Coughlin, President and CEO, MassBio

Debbie Durso-Bumpus, Chief People Officer,
Blueprint Medicines

Kristin Goppel, Consultant for Program
Management, Avania Clinical

Robert Gottlieb, Principal, RMG Associates

John Heffernan, Principal, Park Street Strategies

Melissa Monahan, Chief of Staff, President and
CEO's Office, Boston Medical Center Health System

Sridar Natesan, Vice President of External Innovation
and Partnering, Sanofi-Aventis

Mary Ellen Wiltrout, Director of Online and
Blended Learning Initiatives and Lecturer in Digital
Learning, Massachusetts Institute of Technology,
Department of Biology



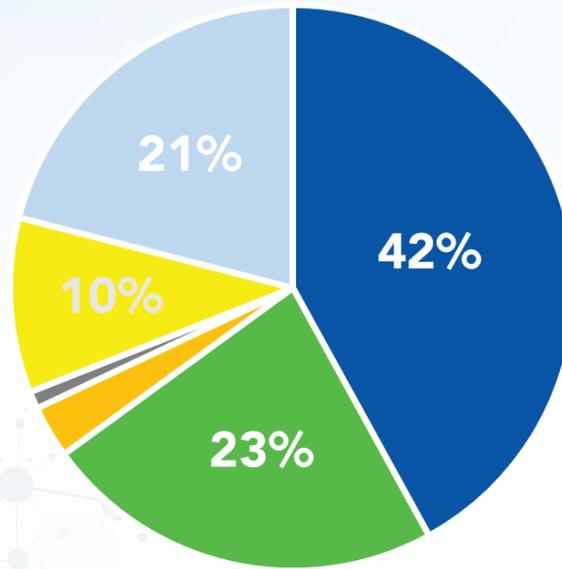
2020 Financials

TOTAL OPERATING REVENUE

\$1,657,335

Operating Income by Source

- Grants
- MassBio contribution
- Donations
- Restricted & Other
- Special Events
- Earned Revenue

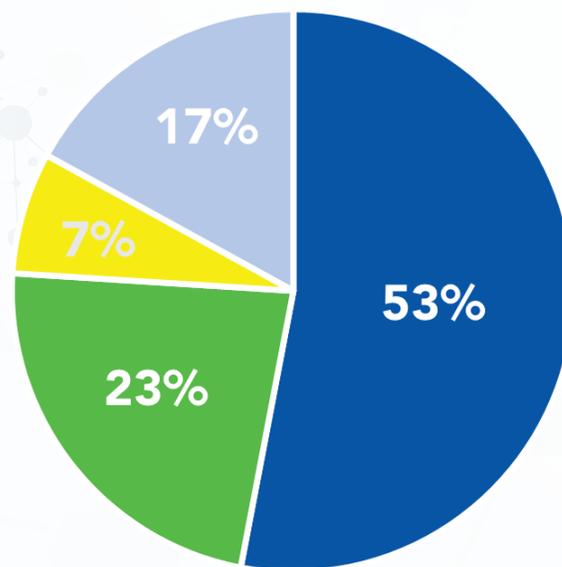


TOTAL OPERATING EXPENSES

\$1,570,138

Expenses by Programs

- BioTeach
- BioTalent
- Outreach
- Corporate Professional Development Courses



Make A Difference

Help Build the Life Sciences Workforce

You can help us open career doors to new communities throughout the state by making education and workforce development programs possible. **How?**

Donate

Your contribution will help us reach our goals to double the number of teachers trained, bring in-depth, long-term science and experiential learning programs to underserved schools, link 1,000 more students with industry professionals so they can see what is possible in their future and provide alternative opportunities that offer new pathways into the industry.

Volunteer

Career Ambassadors build a critical bridge between classroom and careers. Companies can host student visits on-site or virtually so students can connect what they are learning with the work that occurs daily.

Sponsor an Event

Sponsorship is a significant way to support MassBioEd. Options provide opportunities for companies to participate in signature events and receive recognition for their invaluable support.

Learn how to get involved at [MassBioEd.org](https://massbioed.org).

2019-2020 Impact

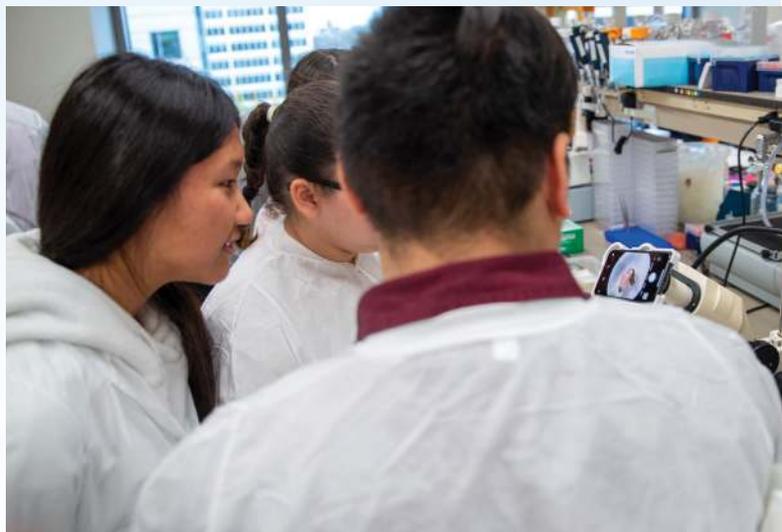
150 teachers from 87 schools participated in free professional training

10.5K+ students engaged in inquiry-based biotechnology lab activities

900+ students from 28 schools engaged in college and career exploration experiences

150+ industry volunteers engaged in student college & career exploration programs

420+ academic & industry professionals accessed the MA Life Sciences Employment Outlook





MassBioEd

MassBioEd Foundation is a
501 (c)(3) charitable
non profit organization.
Learn more at MassBioEd.org.

