

# Massachusetts: The World's Leading Life Sciences Ecosystem



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# About the Massachusetts Life Sciences Center (MLSC)

The MLSC is an economic development agency that makes strategic investments in the state's life sciences ecosystem that support innovation, education, research and development, commercialization, and manufacturing activities in the fields of biopharma, medical device, diagnostics, and digital health.

- Investments in our state's life sciences companies and research institutions to help accelerate the commercialization of promising treatments, therapies, and cures that will improve patient care while creating jobs and driving economic development.
- Investments in the development of a robust and diverse STEM workforce pipeline to meeting growing and evolving demand for life sciences talent.
- Assistance for MA-based company growth and recruiting companies from around the world to establish a presence in Massachusetts.

To date, the MLSC has strategically deployed more than **\$750 million** through a combination of grants, loans, and tax incentives.

# The Massachusetts Life Sciences Ecosystem

Massachusetts has an unparalleled concentration of life sciences companies, colleges and universities, research institutions, hospitals, entrepreneurs, non-profits, and talent.

## Massachusetts is #1 state per capita in:

- ✓ Life Sciences Venture Capital Funds
- ✓ Life Sciences Employment
- ✓ Federal Research Funds
- ✓ Industry R&D Spending
- ✓ Educational Level of Workforce

- MA is home to over 500 MedTech companies and 600 biopharma companies.
  - 18 of the world's 20 largest biopharma companies and all top 20 medical device companies have a presence in Massachusetts.
- MA is a hub for more than 100 world-class hospitals, and nine of them receive the highest amount of NIH funding each year.
- MA has more than 21 million sq. ft. of commercial lab space.
- MA has 114 colleges and universities, including 14 research universities.

# Investing in STEM Education & Workforce Development

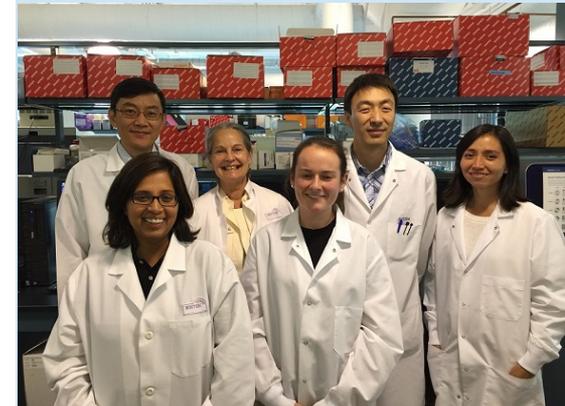
Infrastructure | Experiential Learning | Training | Teacher PD | OST Programs

- **Enabling schools and colleges to renovate labs, purchase equipment/technology, provide teacher professional development, and implement innovative STEM curricula.** Investments since inception:
  - **\$18 million** awarded to nearly **200** high schools & middle schools
  - **\$30 million** awarded to **16** 2-year/community colleges
  - **\$166 million** awarded to **18** 4-year colleges
- **Creating internship opportunities:**
  - *Internship Challenge* has funded more than **4,700** paid internships with over **850 companies**, for college students representing **240** academic institutions.
  - *High School Apprenticeship Challenge* has funded more than **400** paid internships for high school students and graduates with over **100** organizations. Interns have represented more than **120** high schools and nearly **250** students have participated in MLSC-sponsored **lab training programs** that prepare them for internships.
- **Grants to non-profit organizations** that support in-school or extra-curricular STEM programming for underrepresented youth.
- **Sponsorships** for education/workforce events, conferences, and evaluations.

# Internship Challenge

**MLSC creates hundreds of new internship opportunities each year for college students by enabling small companies to hire paid interns.**

- The program connects employers with students through an online platform and reimburses small companies (100 or fewer employees) for stipends of up to \$8,160 per intern (based on \$17/hour for 12 weeks).
- College students and recent graduates apply through the MLSC's website and are interviewed and hired by participating companies.
- Internships can be full- or part-time and are offered throughout the year.
  - Since 2009, the MLSC has funded over **4,700 internships** with more than **850 companies**.
  - Interns represent more than **240 colleges**.
  - Nearly **40% of interns** that have completed college were offered employment directly following their internship.



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# Internships for Underserved College Students

## Project Onramp

**MLSC partners with MassBio, MassBioEd, Life Science Cares, and Bottom Line to offer Project Onramp, a program that helps underserved college students obtain paid summer internships.**

- Bottom Line, a non-profit that helps first-generation students from low-income backgrounds enroll in and graduate from college, provides interns with application and interview support.
- The program offers wraparound experiences to share career paths, offer additional professional skills development, and build a network.
- Since 2019, the program has provided 89 internships with 49 companies.
- **MLSC has contributed \$32,500** (\$7,500 in 2019 and \$25,000 in 2020) to administer the program.
- **MLSC sponsors interns for companies** eligible to receive the *Internship Challenge* stipend reimbursement.

# PROJECT ONRAMP



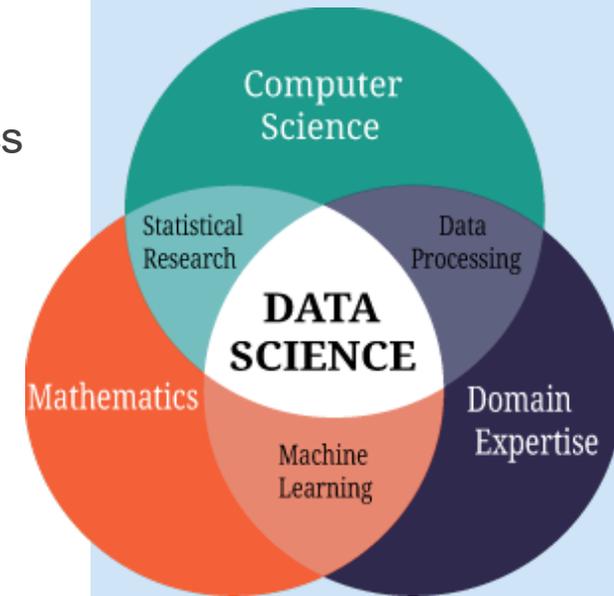
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# Data Science Internship Program

Responding to growing demand for data science talent in the life sciences, MLSC piloted an internship program sponsoring up to 50 positions with small life sciences companies and research institutions.

- The program is intended to provide opportunities that introduce interns to applications of advanced data analytics and data science to the life sciences.
- Prospective interns must demonstrate through their applications that they are proficient in advanced analytics skills and technologies based on their work experience and/or academic training.
- The program funds internships up to six months long for qualified candidates, including those at the Bachelor's, Master's, and Doctoral levels, from anywhere in the world.
- Subsidized pay rates range from \$20-\$40 per hour depending on education level.
- Candidates apply through the MLSC's website and are interviewed and hired by participating employers.



# High School Apprenticeship Challenge Program Overview

**MLSC facilitates and funds paid internship opportunities for 100+ high school students each year and offers a pre-internship lab training program for underserved students.**

- Since 2016, the MLSC has supported 416 internships at 103 companies and research institutions.
- Interns represent 124 Massachusetts high schools.
- 264 students participated in MLSC-sponsored lab training programs.

Program aims to:

- ✓ Supplement life science education with rigorous OST training for underrepresented youth
- ✓ Foster relationships between economically disadvantaged schools and life sciences employers
- ✓ Create paid work-based learning opportunities
- ✓ Develop professional workplace skills
- ✓ Increase awareness of life sciences careers
- ✓ Build a diverse STEM workforce pipeline



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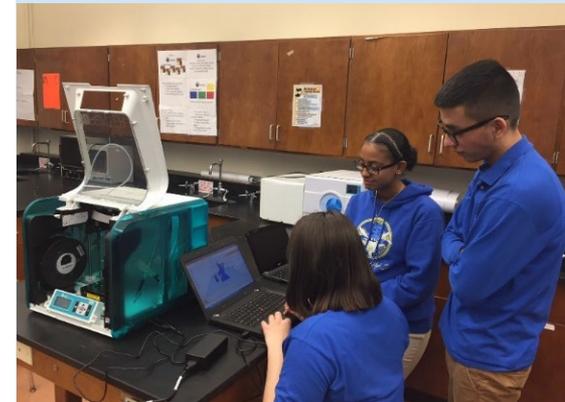
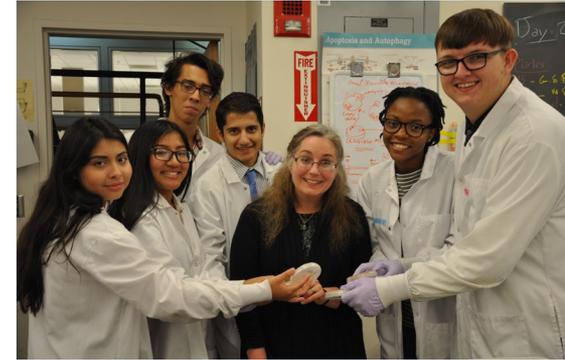
# STEM Equipment & Professional Development Grants

Since 2011, MLSC awarded \$18M to over 200 voc-tech & economically disadvantaged public schools for equipment, supplies, technology, curriculum, & teacher professional development.

- Funding has served schools in 13 of 14 counties and 25 of 26 Gateway Cities.
- More than half of students attending eligible schools have gained access to new equipment and nearly 30% of all public school students attend a school that has received an MLSC grant.

Investments aim to:

- ✓ Close achievement & opportunity gaps
- ✓ Increase educational equity
- ✓ Train a diverse STEM workforce pipeline
- ✓ Expand access to STEM equipment, curriculum, & PD
- ✓ Improve college & career readiness
- ✓ Leverage partnerships



# Capital Grants for Higher Education Institutions

Since 2011, MLSC has awarded more than \$166M to 35 colleges and universities to support the construction, renovation, and/or outfitting of life sciences laboratories and training facilities.

- New state-of-the-art facilities, such as clean rooms, outfitted with industry-standard equipment and supplies are now available in all regions of Massachusetts.
- 60+ grants served both public and private colleges and universities, including 16 2-year/community colleges.
- Grants enabled colleges to train students in first-rate laboratories and provide them with skillsets that meet the needs of their region's life sciences employers.



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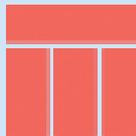
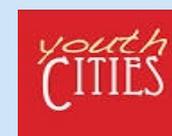
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# Education/Workforce Grants for Non-Profit Organizations

## Serving Underrepresented Students & Professionals

Since 2012, MLSC has awarded grants totaling over \$1M to 25 non-profit organizations advancing STEM education and career-readiness for underrepresented youth.

- Discretionary grants allow MLSC to support organizations that would not have been eligible for any existing funding programs.
- Grants provide transformative resources for organizations that serve underrepresented populations – enabling them to build capacity, expand reach, and increase access to high-quality learning.
- Investments strengthen the workforce pipeline by investing in a wide range of innovative K-12 STEM programs as well as organizations that promote entrepreneurship and professional skills development.
- Awardees included: National Society of Black Engineers, UNCF, Latino STEM Alliance, HMS Biomedical Science Careers Program, The Partnership, SCS Noonan Scholars, The Possible Project, Girls, Inc., Freedom House, Mass Insight, and Boys & Girls Clubs of Metro South and Worcester.



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# Massachusetts Life Sciences Center

*Learn More and Connect:*

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