



STEM Summit V: *Implementing the Plan*

Preparing Massachusetts students for careers in science, technology, engineering and mathematics

Findings from the Life Sciences Talent Initiative

Massachusetts' ability to grow talent has been its greatest strength in developing a life sciences industry that is a global leader. Building upon that strength is essential to ensuring that the Commonwealth maintains its leadership in the life sciences. *Growing Talent: Meeting the Evolving Needs of the Massachusetts Life Sciences Industry* outlines findings from a year-long study of the state's life sciences workforce, and offers guidance to leaders in industry, government and education on strategies to ensure that biopharmaceutical, medical device and clinical research employers have the talent they need to succeed and grow in the Commonwealth.

The study found that more than 80 percent of job growth in the life sciences in Massachusetts in the next six years will be in occupations that require a minimum of a four-year degree. While life sciences employers are generally satisfied with the quality of high-level scientific talent in Massachusetts, they have deep concerns about the long-term pipeline of domestic students who are motivated and prepared to enter higher education and careers in STEM fields. Industry executives who participated in the study also emphasized opportunities in the life sciences for well-educated young professionals in other fields, including business, marketing and sales, communications, and legal and regulatory affairs.

The report recommends that industry associations and employers work closely with educational institutions and state government to:

- Produce and retain more graduate students with interdisciplinary training in the sciences, mathematics, information technology, business and legal affairs
- Strengthen interdisciplinary science education at the undergraduate level and offer more opportunities for experiential learning through internships, cooperative education, and academic projects that require students to solve practical problems
- Improve training programs at the two-year degree, certificate, and vocational school levels, and ensure that they are closely targeted to the needs of employers
- Invest in strategies and programs to improve and expand the pipeline of K-12 students entering higher education and careers in STEM fields.

Growing Talent also identifies programs that have demonstrated success in achieving these objectives.

The Massachusetts Life Sciences Center and the Massachusetts Biotechnology Council, who commissioned the study, will be using findings and recommendations to develop new education, training and career development initiatives.

Growing Talent is available on the website of the UMass Donahue Institute, which conducted the Life Sciences Talent Initiative: http://www.donahue.umassp.edu/docs/growing_talent