

Bridging the Talent Gap:

Connecting Talent to Bioscience Careers

Katherine Lakofsky, EdD

Associate Director, Bioscience Workforce, Delaware Biotechnology Institute, University of Delaware/ Delaware Bioscience Association

Abstract

There is an urgent need to engage, educate, and train a skilled workforce for Delaware's growing life science sector. A sizeable number of these jobs can be obtained with a high school diploma or GED, coupled with an industry informed short-term training program. Unfortunately, this is not widely known, and many disadvantaged populations do not have access to the necessary training. Through a partnership between the Delaware Bioscience Association and the Delaware Biotechnology Institute at the University of Delaware, efforts are currently underway to develop a pilot training program, specifically focusing on the skills needed for biomanufacturing and basic laboratory operations. Additionally, the program will devote significant resources to the identification and recruitment of participants with an emphasis on engaging historically underrepresented populations, as well as removing barriers to accessing the training. The goal is to connect talent to available careers in the industry, providing participants with increased economic mobility and financial stability.

The key to a thriving economy is a thriving workforce. There also remains a persistent gap in health outcomes between poor and rich populations and this gap can be mainly contributed to social determinants of health.¹ One way to address this challenge is to increase access to opportunities that provide the skills needed to be successful in the modern workplace. As such, workforce development programs have been a key area of focus for improving economic mobility and decreasing economic inequality. Here in Delaware, there is a significant opportunity to further develop the bioscience economic development engine by improving the connection between talent and careers.

A recent report from the Delaware Prosperity Partnership (DPP) and the Delaware BioScience Association (Delaware Bio) shows that bioscience is a leading economic driver in Delaware.² The report stated that Delaware's location in the heart of the mid-Atlantic region gives it distinct business advantages, in addition to low property taxes and overall favorable tax policies. Delaware's bioscience community has seen significant growth in recent years, employing approximately 11,000 individuals and directly generating \$2 billion in GDP. Additionally, the number of new biotechnology R&D companies has seen a 65% increase over the last ten years and Delaware now ranks 7th nationally for life science funding per capita.

Recent developments underscore the significant momentum and opportunity for Delaware in the bioscience sector. These include the announcement of a several hundred-million-dollar investment in a new pharmaceutical development and manufacturing facility in Middletown, Delaware,³ hundreds of millions of dollars in investment planned for a new science and innovation park at the former DuPont Chestnut Run site,⁴ a new life science facility planned at the Delaware Technology Park in Newark,⁵ and a \$10 million program supporting the expansion of lab space.⁶ Through information collected from companies, market data and media reports, it

can be fairly estimated that over the next three years Delaware life science companies will need to fill many hundreds of these jobs.⁷ In order to ensure the continued growth and success of these companies in Delaware, a robust talent pipeline is needed.

In 2022, Delaware Bio and the Delaware Biotechnology Institute at the University of Delaware launched a new partnership to develop a comprehensive strategy for life science workforce development in Delaware. The first step was to engage in extensive discussions with employers, training and educational institutions, state and federal government stakeholders and organizations implementing innovative best practices in other states and regions. This work revealed the urgent need – and significant opportunity – for Delaware to pilot new approaches to recruiting and training a life science talent pipeline, with a particular focus on engaging and mobilizing underrepresented populations. Specifically, there is a growing opportunity for life science careers in biomanufacturing and laboratory roles that do not require a 4-year college degree. These positions offer full benefits and the potential for long-term advancement and rich career development. This trend is also seen on a national level with biopharmaceutical and biomanufacturing sectors experiencing strong sustained growth over the past five years; this growth is expected to continue over the next five years.⁸

As a result, we are currently developing a pilot training program that incorporates innovative strategies and partnerships to provide a skilled workforce that can fuel future growth in the important areas of biomanufacturing and laboratory operations, with a target launch date in early 2024. The specific goals of the project are to 1) connect individuals from underserved communities through partnerships with community organizations to training that provides the necessary skills for biomanufacturing and laboratory roles, 2) provide participants with the appropriate tools and supports for career development and success and 3) strengthen partnerships with industry to build a talent pipeline and expand recruitment funnels.

The current growth in the life science industry is being challenged by shrinking talent pools nationwide, and an overall lack of awareness of the diverse types of careers available in the industry. This creates a need for new types of outreach and awareness initiatives. To help achieve this, our pilot program will partner with nonprofit community organizations with deep community knowledge and experience providing educational and career services. Specifically, we will collaborate with community partners serving the urban population within the city of Wilmington to build effective relationships and build trust within the community, in an effort to build awareness and encourage residents to enter the life science workforce. These organizations have existing relationships within the community that can be leveraged to create meaningful engagement with traditionally underserved populations. Additionally, these partnerships will inform and activate essential wrap-around, supportive services to help ensure student retention and ultimate professional success.

The program will be open to any individual with a high school diploma or GED credential. Recruitment will target underemployed or unemployed individuals, with an emphasis on engaging historically underrepresented populations. Classes will be offered at no cost, and students will be provided with a stipend to remove or reduce challenges and barriers, such as lagging technology, lack of transportation, access to childcare, and to help offset lost income. To reduce potential geographic barriers limiting access to training, we are considering multiple training locations and formats. Sites will be prioritized based on proximity or public transit access to target communities; mobile training systems that provide hands-on industry relevant skills will also be explored.

Dr. Lakofsky may be contacted at klakofsk@udel.edu.

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