



National employment in Biomanufacturing has increased significantly within the past decade and is projected to continue growing by double digits annually. In the Kansas City region extending from Columbia, Missouri, to Manhattan, Kansas, the number of life science companies increased significantly between 2009 and 2015. Many of these companies plan to add employees, however, they are finding it difficult to fill entry level job vacancies.

The Kansas City Kansas Biomanufacturing Training Laboratory (KCKBTL) was created to help bridge the awareness gap of opportunities available in the biomanufacturing industry and to provide training for future employees of the biomanufacturing industry. The training lab utilizes a summer externship for Kansas City Kansas Community College faculty and Kansas City Kansas Public Schools high school science teachers to achieve both KCKBTL objectives.

In collaboration with Ceva Biomune (an animal health vaccine manufacturer), six summer externships were offered in spring of 2017 to Kansas City Kansas Public School teachers. The externships consisted of three rotations for teachers in pairs and each rotation lasted two weeks in the summer. Five teachers participated in the initial program and each received a stipend.

Participating teachers learned the processes involved in product manufacturing and worked with some of the department leaders and technicians to increasing their knowledge about biomanufacturing. Additionally, they learned critical skill sets employers require at entry level position, such as the ability to problem solve, working as part of a team, and a good understanding of the metric system.

The externs learned that many of their students can enter the job market directly after high school, however, they realized that changes to their classroom teaching methods would be necessary to prepare students for careers in biomanufacturing. The externs modified their lessons to emphasize aseptic technique in the lab, increased the use of metric system related assignments, and introduced students to writing lab reports with an emphasis on legibility. Importantly, they helped students see the relevance of classroom learning material to future job opportunities.

“We have a growing gap in our educational system when it comes to informing students about how life-saving vaccines are developed and produced. Instructors want to prepare their students to successfully enter the job market. But many do not have first-hand knowledge of processes and procedures involved in taking a concept for a vaccine all the way through research and development to become a product available for purchase,” said Daryl Pint, CEO Ceva Biomune. “These externships are a valuable step in successfully bridging this gap. We heard great feedback from the teachers who participated, and our team looks forward to continuing this partnership in the future.”