

# HELPING COMMUNITY COLLEGES MEET WORKFORCE DEMAND IN CELL AND GENE THERAPEUTICS

## WORKFORCE EXPANSION IN BIOMANUFACTURING EMERGING TECHNOLOGIES (WEBET)



### Montgomery County Community College, Blue Bell, PA

Type:  
Academic Research Institution

Participating Organizations:  
Solano College (CA), MiraCosta College (CA), Quincy College (MA), Forsythe Tech (NC), Shoreline College (WA)



» *Maggie Bryans, Montgomery County Community College*

## INDUSTRY NEED

The discovery and development of new cell- and gene-based therapies has led to an almost exponential growth of the industry—and a clear need for a workforce trained in the biomanufacture of these new therapies. Many community colleges have existing programs that focus on biomanufacturing of traditional protein-based therapeutics, but they needed guidance on how to expand their programs to include the skills and knowledge related to cell and gene therapies.

## SOLUTION

Faculty from six community colleges came together to form the WEBET collaborative to address the need for workforce training programs to support the growing cell and gene therapy industry. Their goal was to develop materials and guidance to help community colleges incorporate training for bioprocessing of cell and gene therapies into their existing courses and programs.

WEBET hired an expert in labor market analysis to better understand the cell and gene therapy industry's workforce needs. They also conducted a series of six listening sessions with hiring managers and subject experts from 28 companies, including Kite Pharma, Thermo Fisher, ViaCyte, A2 Biotherapeutics, UCSD, Bristol Myers Squibb, Lyell, and Seagen. The listening sessions produced a wealth of information about the topics and skills to be included and the types of equipment needed for a cell and gene therapy lab-based curriculum.

WEBET members met over the course of a year to develop skill standards, course outlines, and hands-on lab modules that could be adopted by community college faculty. Standard operating procedures for two lab modules on AAV production and QC were developed. WEBET also held two train-the-trainer sessions on the new materials to provide guidance on implementation; the sessions were attended by more than 130 participants from academic institutions.

## OUTCOME

Project partner colleges expanded their programs to include cell and gene therapy with Solano College developing a new certificate program and Montgomery County Community College, Quincy College and MiraCosta College developing a new course in cell and gene therapy. In addition, the materials and resources developed by WEBET are being incorporated into courses at Frederick Community College and Montgomery College in Maryland, Santa Monica College and Compton College in California, Collin College in Texas, and Alamance Community College in North Carolina. All of the program materials, including the workforce analysis and train-the-trainer videos, have been made available on the [Northeast Biomanufacturing Center and Collaborative \(NBC2\) website](#). An enduring impact of the WEBET project has been the growth of the academic-industry network, which continues to meet yearly to discuss curriculum development.

“Through NIIMBL funding and connections, we generated resources that will be useful for hopefully hundreds of community colleges and training programs across the country.”