Mtech Bioprocess Scale-Up Facility to Expand to IBBR Shady Grove

The Maryland Technology Enterprise Institute (Mtech) Bioprocess Scale-Up Facility (BSF) will double its facilities and staff, expand into Shady Grove, acquire new equipment, and create a pilot plant for biofuels in College Park through the support of a $200,000 Shared Resource Grant from the Maryland Biotechnology Center.

"The purpose of providing this funding to the university is to make sure the BSF's capabilities are available to the growing number of biotechnology companies in Maryland," says Judith Britz, executive director of the Maryland Biotechnology Center. "Expanding cell culture and related services into the I-270 corridor ensures that companies in that region have ready access to these important capabilities."

The BSF, part of Mtech's Biotechnology Research and Education Program (BREP), is a modern bioprocessing laboratory that helps companies scale-up and manufacture biotechnology products and processes, and provides practical training for the region’s workforce and students.

Much of the BSF's work is done using fermentation, growing drug candidates or other biologicals using bacteria on a contract basis. Its lab produces such materials under non-GMP (good manufacturing practice) conditions for process optimization or research conducted prior to human clinical trials. The BSF has conducted more than 1,000 fermentations since 2000 and has accelerated the R&D of numerous companies such as MedImmune and Nabi Biopharmaceuticals, as well as then-fledgling, Maryland-based startups Martek Biosciences and Digene Corporation.

“We pride ourselves on flexibility in our contract work and training programs," says BREP Director Paul Allenza. "This support from the Maryland Biotechnology Center and the University of Maryland will lead to even greater flexibility, expanding not only what we can do but also how efficiently we do it. Bringing us closer to many of the biotechnology companies that can benefit from our workforce training and scale-up expertise is also a real plus."

Through the MBC grant, the BSF will expand to Shady Grove, with the added space
dedicated to non-GMP fermentation and cell culture programs. The new facility will be in what was formerly part of the Center for Advanced Research in Biotechnology and now part of the new Institute for Bioscience and Biotechnology Research (IBBR). The BSF occupies 2,400 square feet at the University of Maryland, College Park location.

The BSF will bring $160,000 worth of equipment from College Park and purchase $200,000 in new equipment for Shady Grove.

The expansion will also enable more work in tissue culture, or growing cells to express certain proteins, which will now be possible as it can be separated from the areas conducting fermentations. This will lower the risk of potential contamination.

Large-scale bioprocessing equipment, including 100-liter and 250-liter fermentors, will stay in College Park to conduct ongoing larger scale work and open up pilot plant biofuel processing for Maryland companies, faculty and students in Maryland universities.

Mtech will hire two additional staff to run the Shady Grove facility.

The BSF also plans to expand its bioprocessing and protein purification trainings and courses at both Shady Grove and College Park, as the new laboratory will allow staff to continue bioprocessing projects while conducting training.

Through its Shared Resource Grants, the MBC administers funding to qualifying universities and non-profit research organizations to assist in the purchase of multi-user equipment or establishing core facilities that specifically allow for collaborations or contractual agreements with Maryland’s bioindustry.