

## Opting for single-use technologies

It can take years to establish a pharmaceutical manufacturing plant; once it's produced it then has to go through a vigorous testing process to ensure it meets industry standards. Implementing single-use technology can drastically reduce this time scale, making the production process much more efficient. The ability to manufacture drugs in a shorter time gives you the flexibility to quickly change processes if needed, potentially saving both time and costs during a drug development.

### The fast road to efficiency

Instead of investing resources into establishing traditional permanent facilities, manufacturers are starting to adopt single-use technologies in their labs. This disposable method is slowly transforming the biopharmaceuticals industry, and so far, the customer feedback has been very positive.

Laureate BioPharmaceuticals, now part of the US CMO, Gallus, has been using Thermo Scientific single-use technology products for many years now. They started out using bioprocess containers and bags but are now employing more advanced technologies, such as single-use bioreactors and fermentors, in the development and manufacture of biologics.

### A tailored approach

Single-use technologies are designed for specific applications while at the same time reducing production costs. After use, they can be efficiently disposed of, eliminating the countless hours spent cleaning and re-sterilizing equipment. Since the equipment isn't reused, the risk of cross-contamination is also significantly reduced.

According to Dr. Michael Utee, chief scientist at Laureate BioPharmaceuticals, the team has noticed a dramatic increase in productivity as the single-use products become more advanced. He says that "the number of titers have rocketed in the past few years," benefiting the production of both large and small quantities of drugs. As diagnostics continue to advance to the stage where medicines are tailored for a small subset of the population, there will be a need to shift from producing drugs in bulk, as has been the case in traditional 'blockbuster drug' production. Instead, the ability to generate smaller quantities of drugs for this purpose will lead to an increase in efficiency and less wastage of resources.

### Onwards and upwards

Utee predicts that in the next three to five years, single-use materials will become even more user-friendly and compatible with key applications like cell culture and protein storage.

Every manufacturer's goal is for their production process to be faster and more cost-effective. Single-use technologies have proven to be comparatively inexpensive and exceedingly practical, making them an option set to transform the future of biopharmaceutical production.

