

## New ambr® 250 Modular Bioreactor Vessel Launched for Cell and Gene Therapy Applications

- **New vessel is designed for gentle stirring and optimum growth of cell lines**
- **Cost-effective, scalable process development of cell and gene therapies**

Goettingen, GER | Royston, UK – June 27, 2019: Sartorius Stedim Biotech (SSB), a leading international partner of the biopharmaceutical industry, today launched a new vessel for its ambr® 250 modular benchtop automated mini bioreactor system. The single-use vessel has been specially designed for therapeutic cell lines and offers the potential for accelerated process development of cell and gene therapy applications and scale-up into cGMP single-use bioreactors and bags.

The new unbaffled vessel design with a large pitched blade impeller has a working volume of 100-250 mL and provides an environment for gentle agitation and mixing without sedimentation, allowing optimal growth of single cell suspensions, cell aggregates or adherent cells on microcarriers. In trials with leading regenerative medicine companies, the new mini bioreactor has shown better cell culture performance compared with less predictive spinner or T-flask models, enabling rapid process optimization and improved scalability to larger bioreactors.

To further support culture of these cell lines, ambr® 250 modular systems also feature a new state-of-the-art motor (100rpm-4,500rpm), ideal for the lower stirrer speeds required by delicate therapeutic cell lines. The system is suitable for culturing cell lines including such as HEK293, CAR-T and other therapeutic cell lines, including a range of stem cells, enabling scalable media and supplement optimization, as well as process development of cell and gene therapies.

The bioreactor system is available with optional BioPAT® MODDE software for DoE (Design of Experiments), to support QBD (Quality by Design) for scale-up to SSB's BIOSTAT® STR stirred bioreactors and scale-out to BIOSTAT® RM TX rocking bags suitable for cGMP production of autologous and allogeneic cell and gene therapies.

"The ambr® 250 systems are established as the biopharma industry standard small scale model for biologics process optimization, and we have been approached by numerous scientists developing cell and gene therapies to extend our technology for these applications," explained Dr. Barney Zoro, ambr® Product Manager at Sartorius Stedim Biotech. "We have responded by designing a new vessel for the ambr® 250 modular system to provide a single-use platform, with a clear scalable pathway to our bioreactors and bags for clinical production of regenerative medicines. Researchers utilizing this workflow, can benefit by reducing time-lines and minimizing manufacturing costs, thus allowing larger patient numbers to access these revolutionary therapies sooner," Zoro added.

**Image files:**



Figure 1: The new mini bioreactor unbaffled vessel design with a large pitched blade impeller, enables a gentle stirring and optimum growth of cell lines.



Figure 2: The ambr® 250 modular bioreactor system can now even be used for cell and gene therapy applications.

**Download Links:**

Figure 1: [ambr 250 modular new vessel](#)

Figure 2: [ambr 250 modular cell and gene therapy](#)

For more details on the upgraded ambr® 250 modular system, scientists should go to this link:  
<https://www.sartorius.com/en/products/fermentation-bioreactors/ambr-multi-parallel-bioreactors/ambr-250-modular>

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**A profile of Sartorius Stedim Biotech**

Sartorius Stedim Biotech is a leading international partner of the biopharmaceutical industry. As a total solutions provider, the company helps its customers to manufacture biotech medications safely, rapidly and economically. Headquartered in Aubagne, France, Sartorius Stedim Biotech is quoted on the Eurolist of Euronext Paris. With its own manufacturing and R&D sites in Europe, North America and Asia and an international network of sales companies, Sartorius Stedim Biotech has a global reach. The Group has been annually growing by double digits on average and has been regularly expanding its portfolio by acquisitions of complementary technologies. In 2018, the company earned sales revenue of €1,212.2 million, and currently employs some 5,800 people.

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