Press Release

Sartorius Stedim Biotech Introduces Mini Microcarrier Bioreactor for Culturing Adherent Cells

- **New vessel for ambr® 250 ht system will enable cost-effective, scalable process development of vaccines in cell culture**
- **Premieres at the BPI European Summit in Amsterdam**

Goettingen | Germany, April 20, 2018 - Sartorius Stedim Biotech (SSB), a leading international supplier for the biopharmaceutical industry today announced the launch of a new mini bioreactor vessel for its ambr® 250 high throughput (ht) system. This new vessel, which is designed for optimal growth of adherent cells on microcarriers will enable rapid, scalable cell culture process development of vaccines. It will be shown on **Booth 47** at the **BPI European Summit** (April 23-25, 2018) in Amsterdam, The Netherlands.

The single-use mini bioreactor for microcarrier culture has a working volume of 100-250 mL and features a single Elephant Ear impeller. This impeller type generates optimum mixing and suspension of microcarriers, allowing adherent cells to grow over the entire microcarrier surface. The new mini vessel is based on cell culture bioreactors in the ambr 250 ht system. Utilizing this bioreactor on the ambr 250 ht system will allow rapid scale-up of optimized adherent cell culture processes to SSB's BIOSTAT® STR range of pilot and manufacturing scale stirred bioreactors. This results in shorter process development timelines than would be achieved by scientists using benchtop bioreactors and spinner flasks.

Simple to set up and use on the ambr 250 ht, this new single-use mini bioreactor minimizes set-up and turnaround time. With up to 24 bioreactors per ambr 250 ht system, the technology is ideal for Design of Experiments (DoE) studies to optimize process development for vaccine manufacturing using a Quality by Design (QbD) approach.

The new vessel has been tested in collaboration with bioprocess experts at Aston University and University College London as part of an Innovate UK funded project. During these studies, all the cell culture parameters were controlled by the ambr 250 ht automated workstation. The results showed that the new microcarrier vessel design enabled growth to confluence of Vero cells on Cytodex microcarriers' surface.

"There has been increasing interest in using microcarriers for culturing adherent cell lines in single-use stirred bioreactors as they offer a cost-effective alternative to two-dimensional approaches for vaccine production using T-flasks and roller bottles," stated Dr Barney Zoro, ambr Product Manager at Sartorius Stedim Biotech. "We are proud to be introducing our new ambr 250 mini bioreactor for culturing adherent cells at the BPI European Summit. Scientists visiting

us on Booth 47 will find out how they can use our new mini bioreactor as a predictive model to help shorten their process development timelines and reduce their vaccine manufacturing costs."

Image File:

New mini microcarrier bioreactor for ambr® high throughput system will enable cost-effective, scalable process development of vaccines in cell culture.

Download: Mini microcarrier bioreactor for ambr® 250 ht

Video:

Dr Barney Zoro, ambr 250 Product Manager, discusses the development and application of the new mini bioreactor vessel for microcarrier cell culture:

https://www.dropbox.com/s/ol8rmqrcwijw895/ambr%20250%20HT%20Microcarrier%20Bioreactor%20v3.mov?dl=0

A profile of Sartorius Stedim Biotech

Sartorius Stedim Biotech is a leading international supplier of products and services that enable the biopharmaceutical industry to develop and manufacture drugs safely and efficiently. As a total solutions provider, Sartorius Stedim Biotech offers a portfolio covering nearly all steps of biopharmaceutical manufacture. The company focuses on single-use technologies and value-added services to meet the rapidly changing technology requirements of the industry it serves. 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. In 2017, the company employed approx. 5,100 people, and earned sales revenue of 1,081 million euros.

ambr® systems are designed and manufactured by Sartorius Stedim Biotech/TAP (Royston UK), specialized for automated cell culture and fermentation systems for life science research, development and production. The ambr® systems are widely used for cell line development and process optimization at pharmaceutical, biotechnology and academic laboratories. They are proven to provide a reliable model and consistent scalability to a range of upstream processes.

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