

Lonza's New eCHO™ Basal Medium and Feed Facilitates Late-Stage Cell Viability and a Consistent Yield of High Integrity Proteins

- Lonza has launched a new basal and feed medium, specifically developed to drive significant viability and integrity enhancements in protein production
- The eCHO™ Medium is ideal for use in the manufacture of recombinant proteins for medical use, such as monoclonal antibodies and complex glycoproteins
- Results demonstrating the performance of the eCHO™ Medium will be presented at the 2019 PEGS Europe and Antibody Engineering and Therapeutics conferences

Nicole Wellens, Global Product Manager for BioTherapeutics Media, Lonza:

“Biopharmaceutical researchers require access to high quality media that can deliver a constant flow of healthy and viable cells to expedite and optimize recombinant protein production. Lonza's eCHO™ Basal Medium and Feed has been designed to meet this need. Drawing from more than 40 years of expertise in media development, we developed this new serum-free, chemically defined, hydrolysate-free and non-animal origin medium to enable late-stage cell viability and maximize protein integrity.”

Basel, Switzerland, 13 November 2019 – Lonza has further expanded its cell culture media portfolio with the addition of the eCHO™ Basal Medium and Feed, which has been designed to optimize protein production by delivering a consistent yield and highly viable cells while keeping lactate levels to a minimum for optimal protein integrity. Researchers working in the manufacture of recombinant proteins for medical use can now benefit from this new serum-free, chemically defined, hydrolysate-free and non-animal origin medium to advance cell proliferation and enhance productivity. The benefits enabled by using Lonza's paired eCHO™ Basal Medium and Feed will be presented during the 2019 PEGS Europe (18-22 November, Lisbon, Portugal) and Antibody Engineering and Therapeutics (9-13 December, San Diego, California) conferences.

Chinese hamster ovary (CHO) cells are commonly used in the manufacture of biotherapeutics, such as monoclonal antibodies, complex glycoproteins and biosimilars. To facilitate the growth of healthy and viable CHO cell cultures for subsequent protein production, it is of utmost importance to use a high-quality medium. However, the lactate typically generated in the course of protein production can have a profound impact on protein integrity, leading to irreproducible, unreliable and misleading results, and even product failure. Furthermore, the

clogging of the filters of protein purification systems and the associated product loss are among the most common challenges facing laboratories, and they can severely limit yield.

Lonza's eCHO™ Medium has been specifically developed to address these challenges. Combining basal and feed medium each as a one powder product, the eCHO™ Medium enhances late-stage cell viability, accelerating protein purification and allowing for the production of a consistently increased amount of proteins per cell. By minimizing the generation of lactate, the medium also safeguards the integrity of proteins, considerably improving post-translational modifications.

The eCHO™ Medium is available in both liquid and powder formats to suit varying application throughput needs. Contrary to other similar media available on the market, the powder consists of a single component, minimizing preparation time for rapid and simplified production scale-up. Additionally, the cost-effective components used to produce the eCHO™ Medium mean that researchers can further benefit from a product that is reasonably priced.

Poster: eCHO™ Basal Medium and Feed for the CHO cells: Easy, Economical, Chemically Defined Animal Origin-Free, Simple One Part Formulation Medium for the Production of Monoclonal Antibodies

During the 2019 PEGS and Antibody Engineering and Therapeutics conferences, Lonza experts will present the results of a study whereby the eCHO™ Medium was used to produce monoclonal antibodies. The study demonstrated the ability of the new medium to deliver consistent product quality and performance, while being easy and economical to use. More specifically, Lonza will reveal how the eCHO™ Medium:

- Produced approximately 18 million cells per ml with a remarkable 95% viability
- Generated a low amount of lactate between 1.5 and 2 g/L, improving product integrity
- Produced consistently high titers of 3 g/L
- Facilitated the benchmarking and scalability of monoclonal antibody production using bioreactors instead of shake flasks

Key Dates to Note:

The poster presentations will be held:

PEGS Europe (Protein and Antibody Engineering Summit)

- 20 November, 10:35 – 11:15; 15:25 – 16:15, 17:45 – 18:45
- 21 November, 10:35 – 11:15; 12:15 – 12:45
- In the exhibit hall at the Lisbon Congress Center, Lisbon Portugal
- Presenter: Nicole Wellens, Senior Product Manager at Lonza

Antibody Engineering and Therapeutics Conference

- 11 December, 10:00 – 12:00; 13:00 – 16:00
- 12 December, 10:00 – 12:00; 13:00 – 16:00
- In the exhibit hall at the Marriott Marquis San Diego, California, USA
- Presenter: Dr. Chandrasekhar Gurramkonda, Senior Scientist at Lonza

Further information about the eCHO™ Medium can be found via www.lonza.com/echo.

About Lonza

Lonza is an integrated solutions provider that creates value along the Healthcare Continuum®. Through our Pharma Biotech & Nutrition segment and our Specialty Ingredients segment businesses, we harness science and technology to serve markets along this continuum. We focus on creating a healthy environment, promoting a healthier lifestyle and preventing illness through consumers' preventive healthcare, as well as improving patient healthcare by supporting our customers to deliver innovative medicines that help treat or even cure severe diseases.

Patients and consumers benefit from our ability to transfer our pharma know-how to the healthcare, hygiene and fast-moving consumer goods environment and to the preservation and protection of the world where we live.

Founded in 1897 in the Swiss Alps, Lonza today is a well-respected global company with more than 100 sites and offices and approximately 15,500 full-time employees worldwide at the end of 2018. The company generated sales of CHF 5.5 billion in 2018 with a CORE EBITDA of CHF 1.5 billion. Further information can be found at www.lonza.com.

Lonza Contact Details

Dr. Kristin Koehler

Investor Relations

Lonza Group Ltd

Tel +41 61 316 8782

kristin.koehler@lonza.com

Dr. Sanna Fowler

Head of External Communications

Lonza Group Ltd

Tel +41 61 316 8929

sanna.fowler@lonza.com

Additional Information and Disclaimer

Lonza Group Ltd has its headquarters in Basel, Switzerland, and is listed on the SIX Swiss Exchange. It has a secondary listing on the Singapore Exchange Securities Trading Limited ("SGX-ST"). Lonza Group Ltd is not subject to the SGX-ST's continuing listing requirements but remains subject to Rules 217 and 751 of the SGX-ST Listing Manual.

Certain matters discussed in this news release may constitute forward-looking statements. These statements are based on current expectations and estimates of Lonza Group Ltd, although Lonza Group Ltd can give no assurance that these expectations and estimates will be achieved. Investors are cautioned that all forward-looking statements involve risks and uncertainty and are qualified in their entirety. The actual results may differ materially in the future from the forward-looking statements included in this news release due to various factors. Furthermore, except as otherwise required by law, Lonza Group Ltd disclaims any intention or obligation to update the statements contained in this news release.