

## Lonza Celebrates 20<sup>th</sup> Anniversary of Nucleofector™ Cell Transfection Platform

- 2021 marks the 20<sup>th</sup> anniversary of Nucleofector™ Platform – the industry-leading non-viral cell transfection method
- The technology is highly regarded and widely used across the research community, with a range of applications from basic research through to cell and gene therapy
- The Nucleofector™ System offers a flexible, reliable approach to transfection, including for primary cells, which are typically hard to transfect

### Quote from Mary Riley, Director Discovery Solutions, Lonza:

“Twenty years ago, the Nucleofector™ Platform revolutionized cell transfection by giving researchers a non-viral tool to modify ‘hard to transfect’ cells. In the decades since, Lonza has continued to innovate, expanding the platform to support new applications, including high-throughput solutions that enabled the advancement of CRISPR, and platforms enabling non-viral transfection for cell and gene therapy. As we celebrate the 20<sup>th</sup> anniversary of this technology, we will continue to innovate, bringing the newest generation of Nucleofector™ Solutions to support our customers from basic research through to commercial clinical applications.”

**Basel, Switzerland, 07 April 2021** – 2021 marks the 20<sup>th</sup> anniversary of Lonza’s groundbreaking Nucleofector™ Technology, the industry’s leading non-viral cell transfection method, which has been cited more than 10,000 times, including in research by two Nobel Laureates. The innovative Nucleofector™ Technology enables the transfer of nucleic acids and proteins directly into the cells’ nuclei by combining optimized electrical parameters and cell type-specific solutions. This offers high transfection efficiency – even for hard-to-transfect cells – opening novel opportunities for disease research and drug discovery, as well as the advancement of gene therapies, immunotherapies and stem cell generation. In addition, Nucleofector™ Technology is the only advanced electroporation method that supports high-throughput use with versatile throughput up to 384-well format, providing scientists with faster results.

Transfection – the process of introducing DNA, RNA or proteins into cells to alter their genotype or phenotype – is a powerful tool that is crucial to various life science applications. There are several transfection methods available, including lipofection, electroporation and viral transduction. However, these methods can be time-consuming, inefficient (resulting in low cell viability or low transfection efficiency), and unsuitable for some cell types. Nucleofector™ Technology, on the other hand, enables highly efficient transfection – even for primary cells,

stem cells, neurons, and cell lines that have traditionally been hard to transfect using non-viral transfection methods.

Since its launch 20 years ago, Lonza has continued to innovate the Nucleofector™ Device, together with its kits and optimized protocols, to meet the ever-changing needs of scientists, including suitability for CRISPR and gene therapy applications. Such development of the system has expanded its application to support differing cell numbers and throughputs and provides protocols for more than 650 cell types.

The Nucleofector™ Device and the successful Nucleofector™ Technology were first developed and launched by Amaxa and were later acquired by Lonza in 2008. Still built using German engineering and manufacturing, today's fourth generation Nucleofector™ Platform comprises a range of units that can be used in combination to meet differing research needs. In 2016, Lonza introduced the large-volume 4D-Nucleofector™ LV Unit, expanding the proven system to closed transfection of up to  $1 \times 10^9$  cells and enabling translational and clinical applications in cell and gene therapy.

Today, scientists worldwide rely on the Nucleofector™ Platform to drive their cell-based research and therapies – and Lonza continues to innovate and enhance the system to fuel the research of tomorrow.

For more information on the Nucleofector™ Technology, visit:  
<https://bioscience.lonza.com/nucleofector-technology>

## About Lonza

Lonza is the preferred global partner to the pharmaceutical, biotech and nutrition markets. We work to prevent illness and enable a healthier world by supporting our customers to deliver new and innovative medicines that help treat a wide range of diseases. We achieve this by combining technological insight with world-class manufacturing, scientific expertise and process excellence. These enable our customers to commercialize their discoveries and innovations in the healthcare sector.

Founded in 1897 in the Swiss Alps, today Lonza operates across five continents. With approximately 14,000 full-time employees, we are built from high-performing teams and of individual talent who make a meaningful difference to our own business, as well as to the communities in which we operate. The company generated sales of CHF 4.5 billion in 2020 with a CORE EBITDA of CHF 1.4 billion. Find out more at [www.lonza.com](http://www.lonza.com)

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