

MAXCYTE SCALABLE ELECTROPORATION: A UNIVERSAL CELL ENGINEERING PLATFORM FOR DEVELOPMENT OF CELL-BASED MEDICINES FROM R&D TO CLINIC

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Each cell-based therapeutic modality – from viral vectors to immune cell engineering and in situ gene editing – relies on different biologic approaches, however, they all require some type of cell engineering therapeutic manufacturing. MaxCyte developed a non-viral, electroporation-based cell engineering technology that has the performance, flexibility, safety and scalability for use in cell therapy development through to manufacturing for patient treatment. In this poster, we present capabilities of MaxCyte scalable electroporation, a platform of cGMP-compliant, CE-marked instruments with an FDA Master File. Data for high performance electroporation of a variety of cell types commonly used in cellular therapeutics, including adherent and suspension cells as well as cell lines and primary cells, are summarized. Use of MaxCyte electroporation for a breadth of real world applications are highlighted including lentivirus and AAV production, engineering of primary T-cells for the expression of an anti-mesothelin CAR molecule, and CRISPR-mediate gene editing of stem cells. These data will directly illustrate the scalability and consistency of MaxCyte electroporation that enables the use of this single cell engineering technology from early R&D to patient dosing of cell-based biotherapeutics.