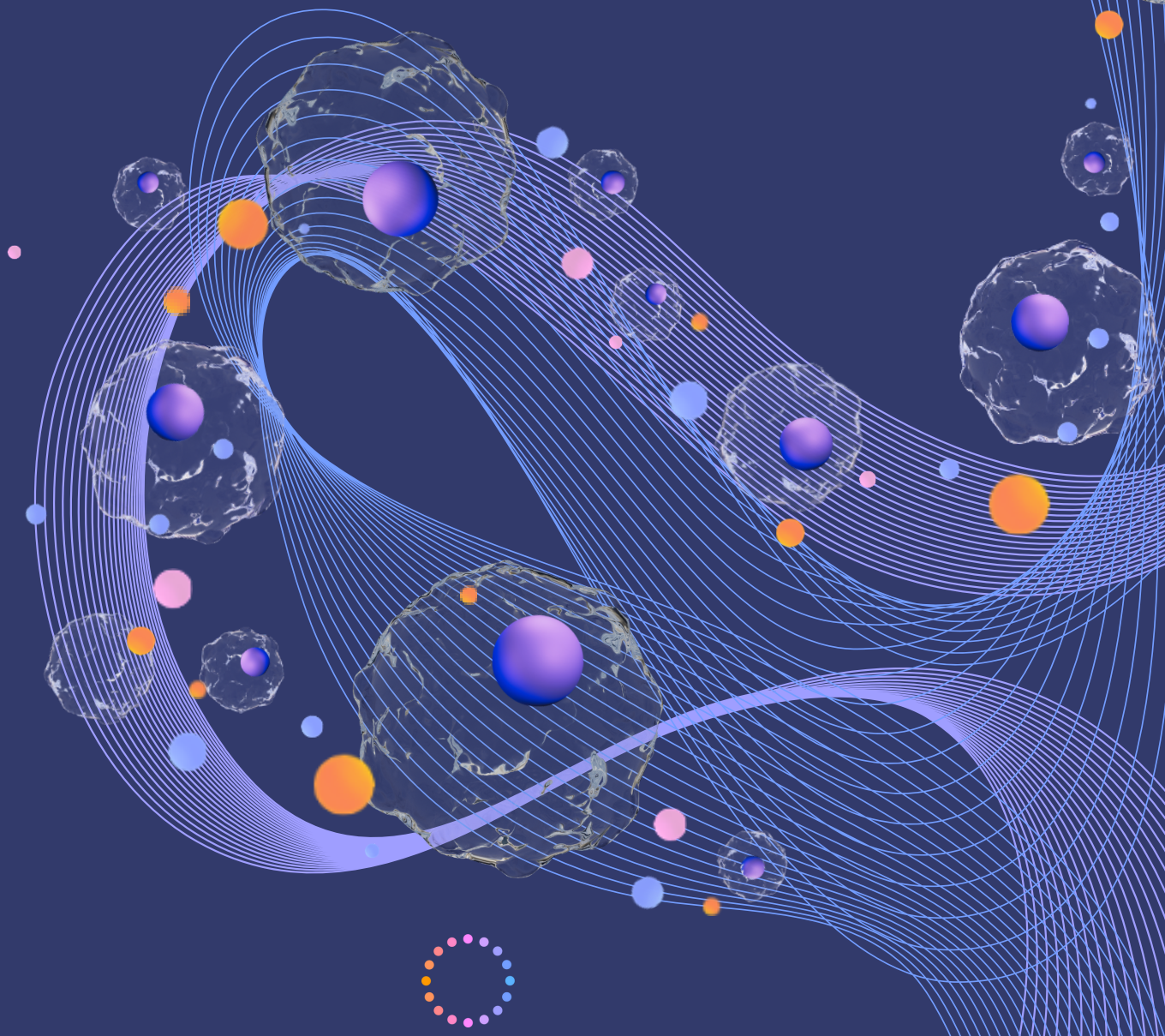
KYTOPEN

Flowfect Tx™ GMP Cell Engineering Platform

Transforming How Cell Therapies Are Manufactured



Flowfect Tx™ Cellular Engineering Platform

Built for GMP-compliant manufacturing, the Flowfect Tx™ continuous flow cellular engineering platform enables high-efficiency, non-viral gene editing — combining speed, precision, and scalability in a closed, automated system.

An easy-to-use platform, designed for applications from process development to large-scale GMP manufacturing. Continuous flow transfection eliminates batch processing and enables the processing of unlimited volumes, delivering therapeutically relevant yields of high-quality cells quicker.

Continuous Flow Enables

High Therapeutic Cell Yield	Efficient transfection at lower electrical energies resulting in robust cell health and high yields of edited cells.
Limitless Volume at High Speed	Proven delivery of payloads to up to 200 billion cells in 500 mL within 15 minutes, all in a single batch.
Flexible Development Window	Working concentrations ranging from 3 x 10^6 to 3 x 10^8 cells/mL, in limitless volumes.

Scale: 1 mL – 1L+ (up to 50 mL/min)



Plug and Play

Flowfect Tx™ platform is engineered for volume — and tuned for cell health.

Plug and play technology with an integrated software UI, compact footprint, and high performance across a wide range of cell types and payloads—enabling rapid, scalable transfection without complex setup or customization.

The Flowfect Tx™ platform overcomes the limitations of conventional electroporators, which can overheat, damage cells, and increase the risk of contamination during batch processing.

A highly tunable system, it allows for the adjustment of multiple parameters to maximize transfection efficiency, cell health, and cell yield.

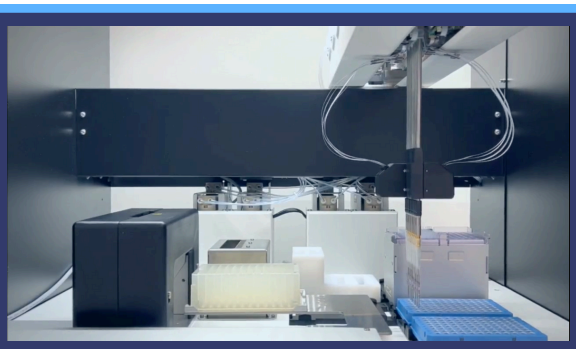
What sets the Flowfect Tx™ platform apart:

- Combines mechanical and electrical forces to reduce stress on cells
- Processes billions of cells in just minutes — all in a single batch
- Closed, single-use cartridges minimize handling and contamination risk
- Supports mRNA, DNA, and RNP delivery across diverse cell types

Flowfect Discover™ 96-well Platform

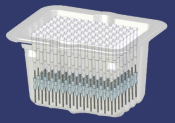
Flowfect Discover™ 96-well platform is an automated small volume (20-100 uL, 96 reactions) liquid-handling platform capable of performing high throughput transfections for screening and process optimization.

Customize and fine tune delivery conditions with multiple parameters through DOE optimization and scale with ease, with the same Flowcell continuous flow technology as the Flowfect Tx platform.



Small scale: 20-100 uL, 96 reactions





GeneFab

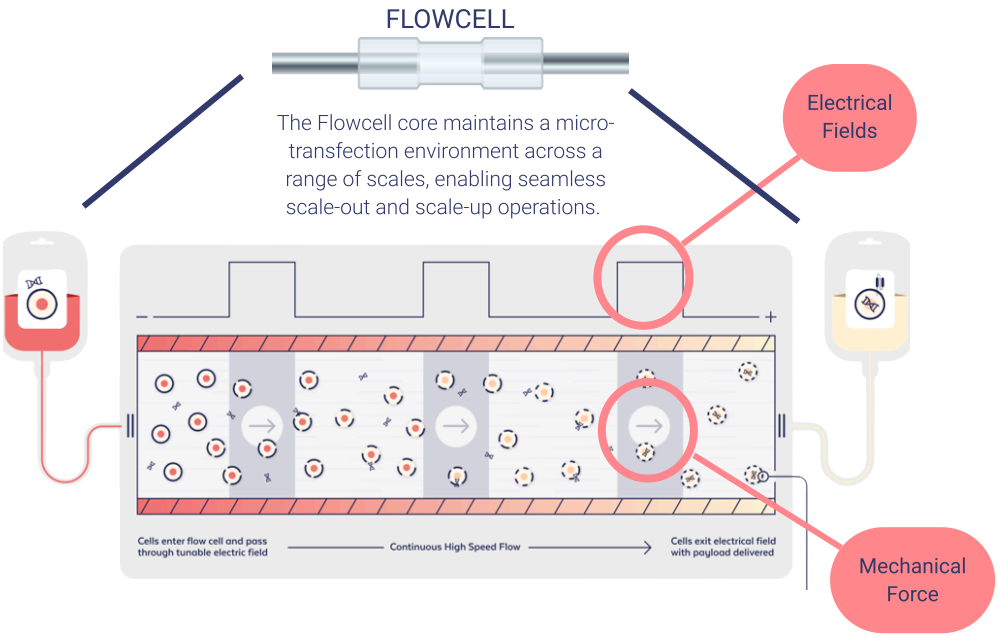
tinuous Flow Technology

Flowfect® continuous flow technology simplifies scale-up with high-efficiency, non-viral gene delivery, and built-in protection for robust cell health and high yields of edited cells.

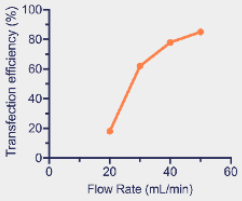
How it Works

Electro-mechanical method leveraging electrical energy coupled with high fluid rates (mechanical force) enable cell permeation and delivery of exogenous material.

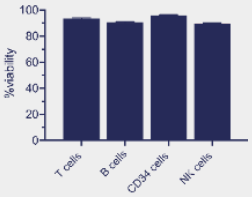
Reduced electrical energy required to enable pore formation by introducing a mechanical component to the total energy applied to cells.



Enhanced Outcome with Optimized Flow Rate Tunability

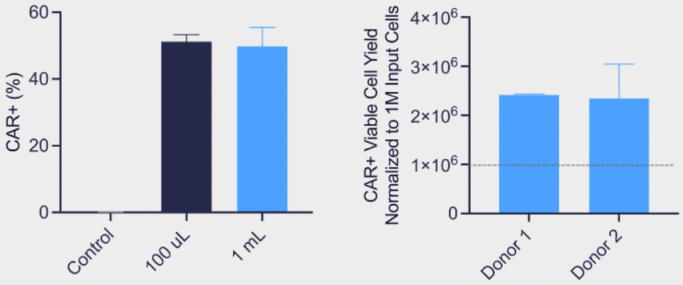


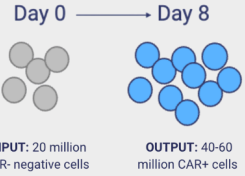
Flow rate significantly impacts transfection while electrical parameters are held constant.



Transfection is safer for cells and results in higher viability across many cell types and applications. (48hr RNP, B cell mRNA)

Seamless Transition from Process Development to Manufacturing Scale

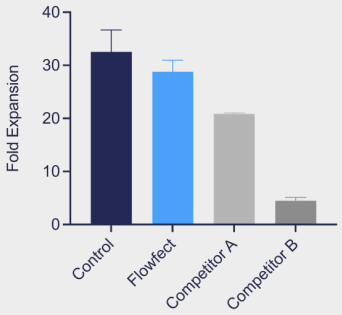


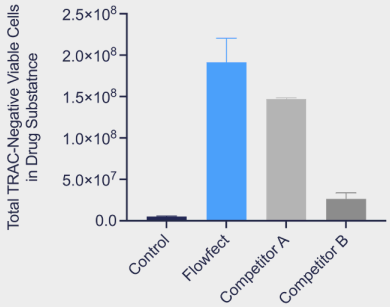


Primary activated T cells were transfected with TRAC spCas9 RNP and CD19CAR nanoplasmid. (A) spCas9-mediated CD19CAR knock-in efficiency on day 8 post-transfection, measured by flow cytometry. (B) Day 8 CAR+ viable cell yields, normalized to 1M input cells calculated as (viability x %CAR+ x day 8 expansion).

Data from joint Kytopen and Aldevron poster presented at ISCT 2025

Processing Billions of Healthy, High-Quality Engineered Cells in Minutes





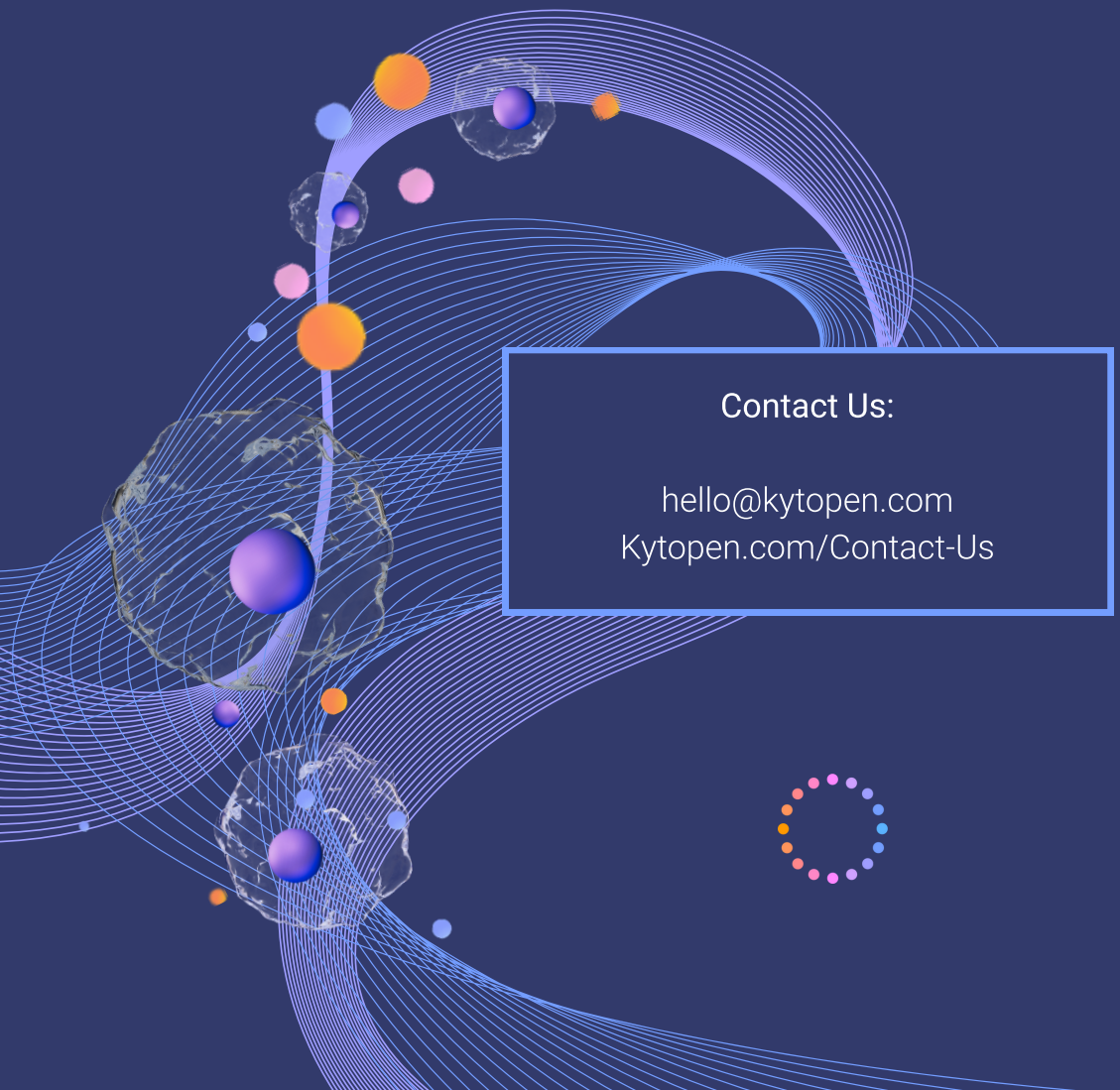
A 10-day gene knockout study (Cas9 RNP targeted to TRAC locus) was performed with primary T cells using manufacturer recommended settings but without further optimization. Cell expansion and total viable edited cell yield are shown.

Data from comparative study conducted by the cell therapy CDMO services group at Charles River International, INC

GMP Manufacturing Compliance:

The Flowefect Tx™ platform is GMP manufactured, safety tested, and provided with regulatory documentation to support your cell therapy development from discovery to clinical and commercial manufacturing.

- Drug Master File (DMF) filed with FDA
- 21 CFR Part 11 compliant software, including access to the Audit Trail and additional account security features
- Regulatory support files (RSFs) available upon request
- Flowfect Tx™ instrument and consumables manufactured in an ISO 13485 certified facility
- Comprehensive GMP service contract



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