



We Help Bring Life-Saving Treatments to the World

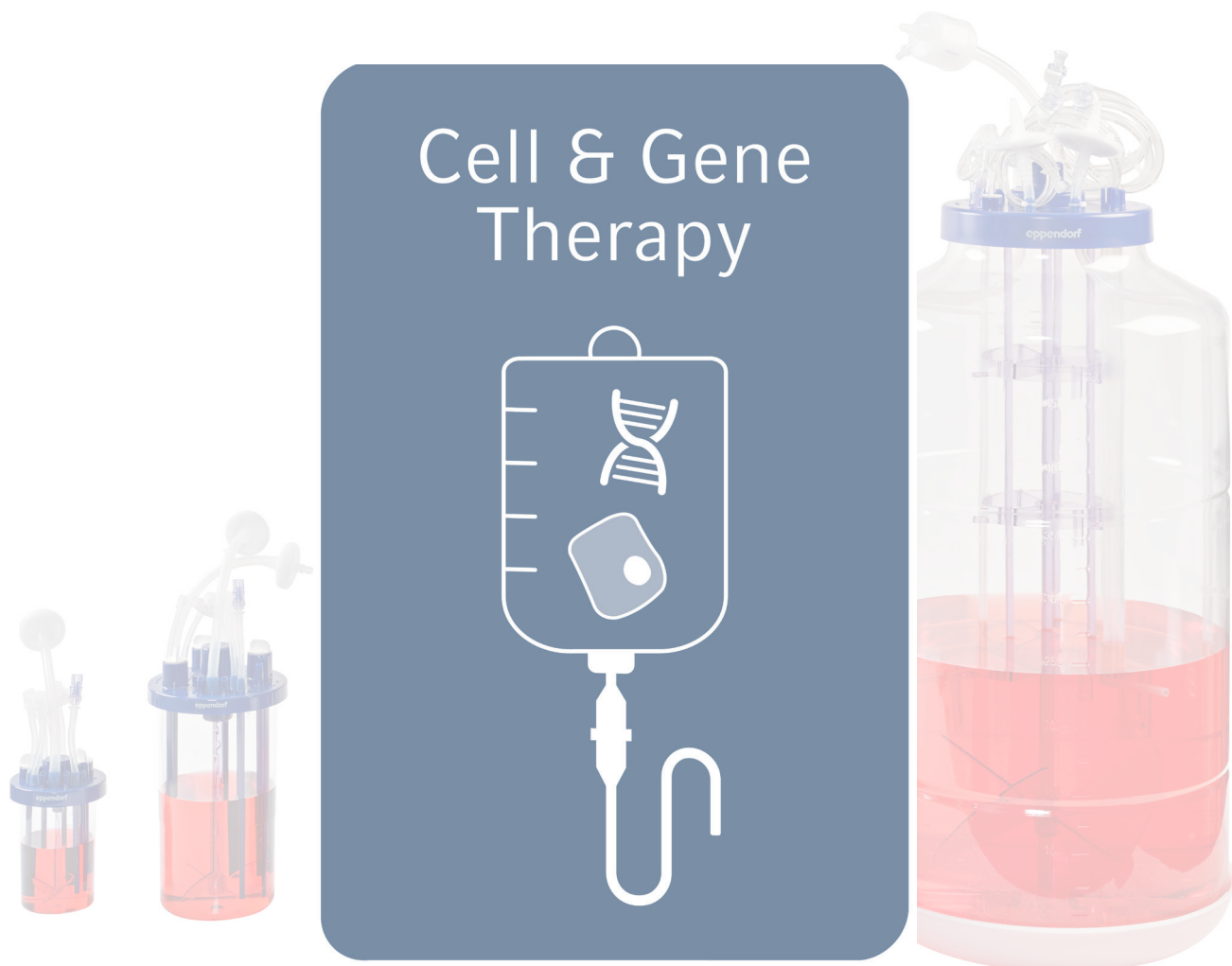
A Guide to Eppendorf Bioprocess Cell & Gene Therapy Solutions

Tailored Solutions for Cell & Gene Therapy Applications

The progress in the CGT field holds great potential to revolutionize our life in the future, but this progress will only be possible with the help of the bioprocessing industry. Stirred-tank bioreactors will be the game-changing devices to fulfill the increasing demand for the reproducible production of cell cultures with high density and viability.

For more than a decade, our Eppendorf bioprocess solutions have been successfully employed in the development of cell and gene therapies with our single-use stirred-tank bioreactor technology. Our purpose is to help bring life-saving treatments to the world, and we are doing this by pioneering the gold standard in this booming industry.

Join us on this journey to setting new standards for the future of bioprocessing and advancing the frontier of life-changing therapies.



Higher Yields in Closed Systems - BioBLU® Single-Use Bioreactors

The new industry standard for cell cultivations!

We are convinced that single-use bioreactors will be the gold standard in the pharmaceutical industry to fulfill the growing demand for high-density cell cultures for cell and gene therapy applications. For more than a decade now, we have been serving the market with our well-known rigid-wall single-use bioreactors. Let our extensive experience benefit your process and reach out to our team today! Send a mail to bioprocess-info@eppendorf.com for more information on our bioprocessing solutions.

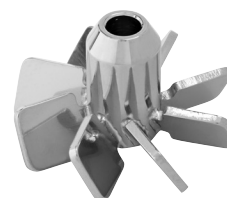
Single-Use Bioreactor Benefits

- > Closed systems and non-invasive sensor technology reduce contamination risks
- > Easy, user-friendly set-up for rapid turnaround, shorter development times and lower operating costs
- > Proven performance and scalability of stirred-tank design
- > Simplify installation with our rigid-wall design, and no risk of damages due to collapsing bioreactor bags
- > Special variants for adherent or aggregate cell cultures



BioBLU c Single-Use Bioreactors for cell culture applications

Single-use solutions for small, bench and pilot-scale cell culture applications. A full portfolio of vessels covers a working volume range of 100 mL – 40 L, offering unmatched scalability. The single-layer polymer design mitigates issues related to leachables and extractables.



Our Gentle »Stem Cell« Impeller Available for 0.3L Single-Use and 1L Glass Bioreactors

Especially developed for aggregate stem cell cultures. Our special 8-blade impeller ensures reduced cell settling and homogeneous mixing at low agitation speeds to reduce the stress for your stem cells.



Are you in the need of sufficient plasmid or vector production? Try our BioBLU f Single-Use Bioreactors for microbial applications!

Single-use solutions for fermentation applications, covering a working volume range of 65 mL – 3.75 L. High yield plasmid production in small volumes. Powerful overhead drives featuring Rushton-type impellers, and effective cooling make it possible to achieve the demands of fermentation processes on mass transfer and heat removal.

Interested in learning more about the capabilities of BioBLUs?

AAV vectors have gained momentum as one of the most effective gene & protein delivery tools in vaccine production as well as gene therapy. Read the application note to learn, how we used a suspension-adapted HEK293 cell line (Expi293F) as the host and incorporated a Helper-Free AAV System to eliminate the requirement for wild-type adenovirus co-infection.

Download our application note 450:
<https://eppendorf.group/AAV-production>



Versatile Bioreactor Solutions

DASbox® Mini
Bioreactor System



DoE
Multiple
parameter
testing

SciVario® twin



Scalability
Easy tech
transfer from
small to bench

BioFlo® 320



**Large Scale
Processing**
with qualified
systems

	DASbox® Mini Bioreactor System	SciVario® twin	BioFlo® 320
Working volume range	60 - 250 mL	0.2 - 40 L ¹	0.25 - 40 L
Single-use bioreactors available	•	•	•
Glass vessels, autoclavable	•	•	•
Interchangeable vessels	•	•	•
Plasmid/Vector Production	•	•	•
Mammalian/animal cell culture	•	•	•
Stem cells	•	• ³	•
Number of parallel units	Up to 24	Up to 16 (with PC V7)	Up to 8
Controller	DASware control	Touchscreen	Touchscreen
Touchscreen controller		•	•
SCADA Software Connectivity (DASware® Control or BioCommand®)	•	•	•
DeltaV™ Connectivity			•
Gas mixing options	4 gas (air, N ₂ , O ₂ , CO ₂)	4 gas (air, N ₂ , O ₂ , CO ₂)	4 gas (air, N ₂ , O ₂ , CO ₂)
Gas flow control²	TMFC	TMFC	TMFC
Exhaust analysis	•	•	•
Optical density measurement	•		•
System Qualification	•		•
Software Validation			• ⁴

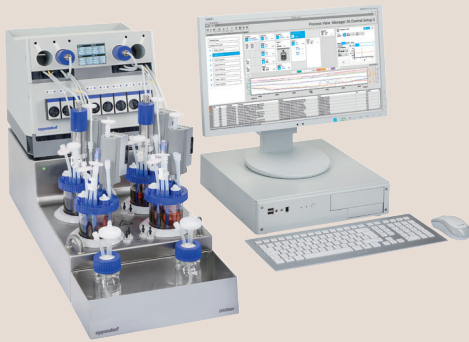
¹ Realized using multiple vessels

² Gas Flow Controllers: TMFC=Thermal Mass Flow Controller
optional

⁴ BioCommand Batch Control Plus

For Cell & Gene Therapy Development

Discover the perfect bioreactor solutions for every step of your bioprocessing journey. From small-scale to bench-scale research, our versatile and cutting-edge offerings are designed to meet your unique needs. Unleash the power of advanced control, seamless scalability, and user-friendly interfaces for unparalleled precision and efficiency.



The Multitasking Expert

for process development and optimization

- > 4-fold parallel system extendable to up to 24 parallel operated glass or single-use bioreactors
- > Compact mini bioreactor system: requires only 7 cm (3 inches) bench space per bioreactor
- > Optimal tool for DoE and scale down approaches
- > Innovative liquid-free temperature control system needs no coolant agent supply accurate monitoring and control of pH, DO and level
- > Variable speed pumps for accurate liquid addition
- > 4 mass flow controllers per bioreactor allow for individual mixing of air, N₂, O₂ and CO₂ to headspace and/or submerged

The Modular Tech-Transfer Genius:

- > Extendable to up to 16 bioreactors operated with glass or single-use bioreactors
- > Run different vessel sizes at the same time
- > Customizable and flexible bay-drawer concept support today's as well as future need
- > Automated detection and recognition of plugged-in accessories
- > Wide-range precise pumps for liquid addition from 0.005 – 600 mL/h and 4.5 – 5200 mL/h.
- > Advanced process monitoring, control, and data logging with DASware® control 6



The Bench-Scale Workhorse

- > Scale up modeling software for the calculation of important process parameters
- > Control eight units from a single user interface
- > Trend display with up to twelve process values within a single view
- > Automated calibration for all attached DO sensors at once
- > Automatic gas mixing algorithms for simplified control (4-gas, 3-gas, O₂ enrichment, N₂ enrichment)
- > DeltaV® compatibility available through DeltaV Discovery and DeltaV ProPlus PAS

November
21st, 2023

Van der Valk Sassenheim,
Leiden, NL



Stem Cell Community Day

HYBRID LEIDEN, NETHERLANDS – NOVEMBER 21, 2023 **eppendorf**

Win 1000€ for the best poster!

It's all about Stem Cells

Confirmed speakers

- > **Dr. Felix Manstein**
Research Scientist, Evotec SE
- > **Dr. Robert Zweigerdt**
Principal Investigator, Hannover Medical School,
Germany
- > **Klaus Graumann**
CEO and co-founder Phoenestra GmbH,
Linz, Austria
- > **Dr. Patrick Statham**
Bioprocessing Scientist at Cell and Gene Therapy
Catapult, UK
- > **Dr. Françoise de Longuevielle**
Head of Core Test Lab, Eppendorf, Belgium

The Stem Cell Community Day 2023 will be held in a hybrid format. You have the flexibility to choose between attending the conference venue or joining the event remotely through our online events platform.

Register now: www.stemcellday.de

Questions or wishes? Send us an email to stemcellday@eppendorf.de

Your local distributor: www.eppendorf.com/contact
Eppendorf SE · Barkhausenweg 1 · 22339 Hamburg · Germany
eppendorf@eppendorf.com · www.eppendorf.com

www.eppendorf.com/bioprocess