RESULTS & DISCUSSION

After 3 days, reached the target cell density needed for similar growth profile of HEK293T in iCELLis Nano.

Use of the new mPath 1,2

This work demonstrates the feasibility of Oxygen limitation in Xpansion Bioreactor with pH profile similar between Xpansion 10 and 200.

Further work can be done with Xpansion trains (Figure 1). Previous studies at Pall (+41 (0)26 350 53 00 (Europe) &+1 800 717 7255 (USA) Contact: +1 800 717 7255 (USA))

transient transfection processes.

train availability

adherent manufacturing in iCELLis 500+

Here, iCELLis 500+ bioreactor inoculation growth in the Xpansion 200 bioreactor for trains (Figure 1).

Figure 1

Xpansion 200 seed train bioreactor for iCELLis Nano production bioreactor inoculation as a proof of principle for iCELLis 500+ bioreactor operation. For this experiment, a previous proof of principle for iCELLis 500+ bioreactor was used.

Figure 2

Xpansion 200 seed train bioreactor for iCELLis Nano production bioreactor inoculation as a proof of principle for iCELLis 500+ bioreactor operation. For this experiment, a previous proof of principle for iCELLis 500+ bioreactor was used.

Figure 3

Inoculation and cell harvest process design for Xpansion 200 seed train bioreactor

1. Fill Xpansion bioreactor with media + inoculum. After 4 days, pump spent media back into bioreactor
2. Wash Xpansion bioreactor with PBS, pump PBS wash back into bioreactor (pump speed ~ 3 L/min)
3. Fill Xpansion bioreactor with 25% TrypsE solution (25°C, 1800 cells/cm²)
4. Collect harvest cells into harvest bioreactor (pH 7.0 & 7.2)
5. Harvest cells by pumping through harvest manifold (series of small size tubing and reduce)
6. Harvest cell nuclei counts
7. Total cell count method
8. Harvest cell viability
9. Wash Xpansion bioreactor with PBS, wait 30 minutes
10. Harvest cell nuclei counts
11. Total cell count method
12. Harvest cell viability
13. Harvest cell nuclei counts
14. Total cell count method
15. Harvest cell viability
16. Harvest cell nuclei counts

Figure 4

Disolved oxygen levels, oxygen flow rate, and pH profiles in the Xpansion 10 and Xpansion 200 bioreactors with HEK293T adherent cells

High cell density harvest in Xpansion 10 and 200 bioreactors as compared to TF75 control flasks.