

# PERFORMANCE

## CHO MEDIA

### EX-CELL<sup>®</sup> ADVANCED<sup>™</sup> CHO FED-BATCH SYSTEM

This high performing, chemically-defined CHO Fed-batch System has been developed across a range of widely used industrial CHO cell lines, including SAFC's proprietary CHOZN<sup>®</sup> cell line. Robust scale up and effortless adaptation offers those in biopharmaceutical development the opportunity to get their process up and running faster and with proven cost efficiencies.

#### STUDY DESIGN:

Three distinct model CHO cell lines (CHO S, CHOZN GS and CHO dhr) were selected for a comparative evaluation of the EX-CELL CHO Fed-batch System with leading commercially available CHO cell culture media and feed supplements from three different vendors. Culture conditions and feed strategy.

#### CULTURE CONDITIONS

- TPP bioreactor tube cultures
- 200 rpm / 50 mm orbital diameter
- 37 °C, 80% RH, 5% CO<sub>2</sub> (Note: 8% CO<sub>2</sub> with CHO S)

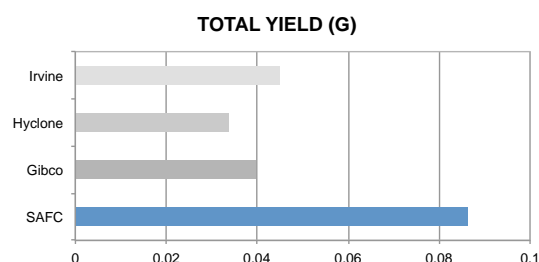
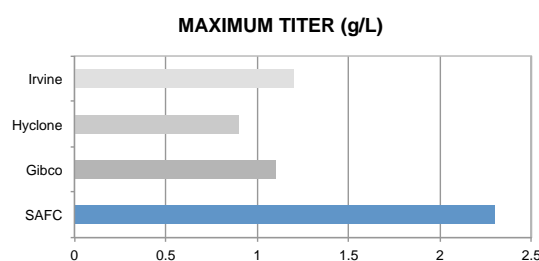
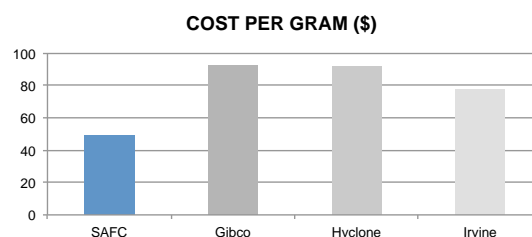
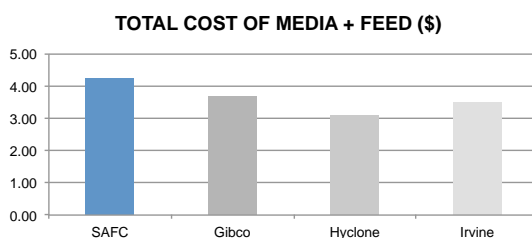
#### FEED STRATEGY

- 5–10% (v/v) bolus addition on culture days 3, 5, 7, 9 and 11
- Glucose concentration maintained above 4 g/L

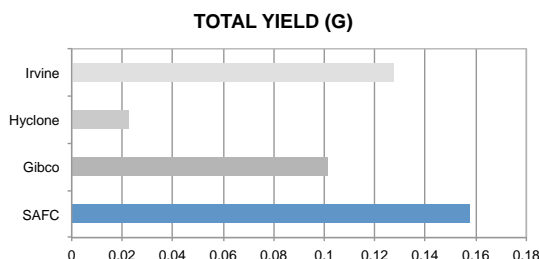
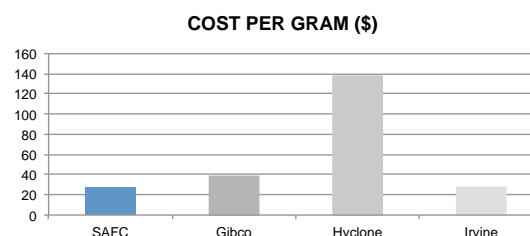
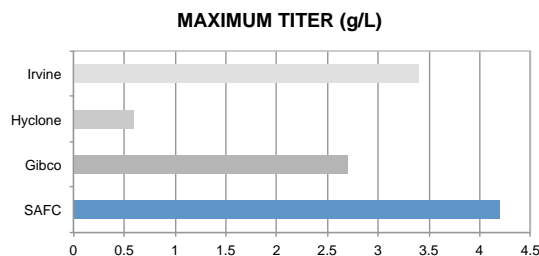
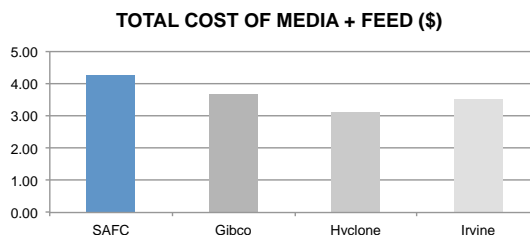
#### RESULTS:

The cost benefit for using the EX-CELL CHO Fed-batch System is shown for each cell line.

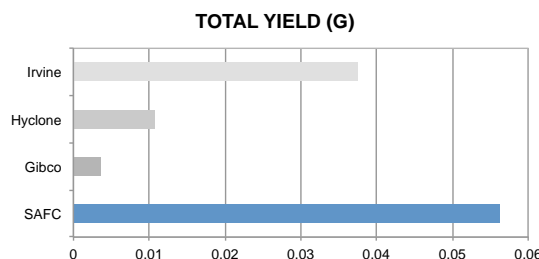
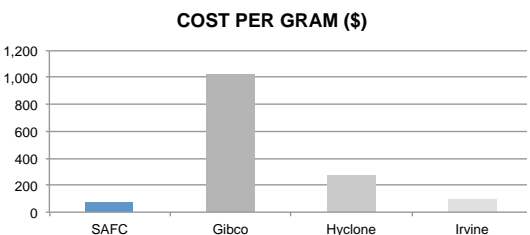
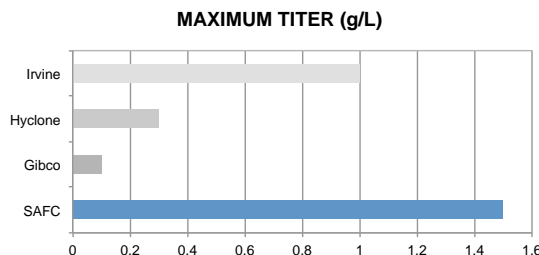
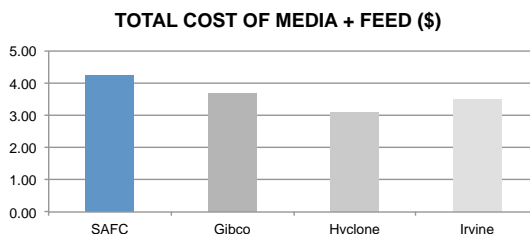
### COST BENEFIT ANALYSIS – CHO S



## COST BENEFIT ANALYSIS – CHOZN GS



## COST BENEFIT ANALYSIS – CHO dhfr



## STUDY CONCLUSION

The EX-CELL Advanced CHO Fed-batch System demonstrated a sustained high biomass with maximum titers across all model cell lines. Moreover the optimized media and feed combination by SAFC outperformed other leading commercial fed-batch products with a 2–4 fold increase in titer and superior economics.

For more information, visit  
[sigma-aldrich.com/CHOperformance](http://sigma-aldrich.com/CHOperformance)



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