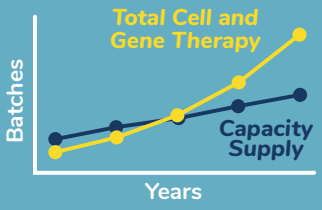
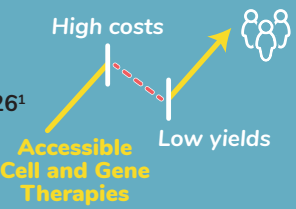
CLOSING THE GAPS IN CELL AND GENE THERAPY MANUFACTURING:
A BIOPROCESS MODELLING CASE STUDY

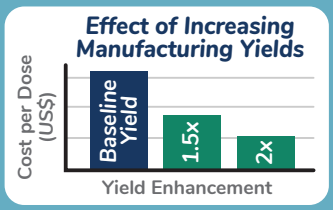


THE FACTS:

- **800+** ongoing clinical trial products involving **virus products**[1]
- **10x** increase in demand expected by 2026[1]
- There is a **gap** between **demand** and **manufacturing capacity**



Upstream Process Additives can increase viral vector manufacturing yields



A 1.5-fold increase in yield **decreases cost per dose by 33%** !

Case Study: Process Economics of Upstream Manufacturing Enhancement

Model 2-fold enhancement in upstream yield

Assess process modifications enabled by 2-fold enhancement in yield

Virica uses **BioSolve Process** to model viral vector manufacturing processes

Scenario 1:

Reduce the **NUMBER** of Bioreactors from **3 to 2**

Most Significant Annual Savings	
Capital	-25%
Materials and Consumables	-33%
Labour	-28%

Scenario 2:

Reduce the **SIZE** of Bioreactors from **500L to 300L**

Most Significant Annual Savings	
Water Usage	-6%
Materials and Consumables	-13%
Plastics Usage	-24%

Optimizing your Manufacturing Process Leads to:

↑ Yield ↓ Cost ↓ Waste

VSE™ Technology Reduces Upstream Manufacturing Costs

Virica's Viral Sensitizer technology (VSEs™) are small molecules that boost upstream viral manufacturing yields across a wide range of substrates and cell lines by ***curbing antiviral defenses.***

For more information, please contact us at
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virica

[1]Rininger, J., Fennell, A., Schoukroun-Barnes, L., Peterson, C., & Speidel, J. (2019, December 17). *Capacity Analysis for Viral Vector Manufacturing: Is There Enough?*