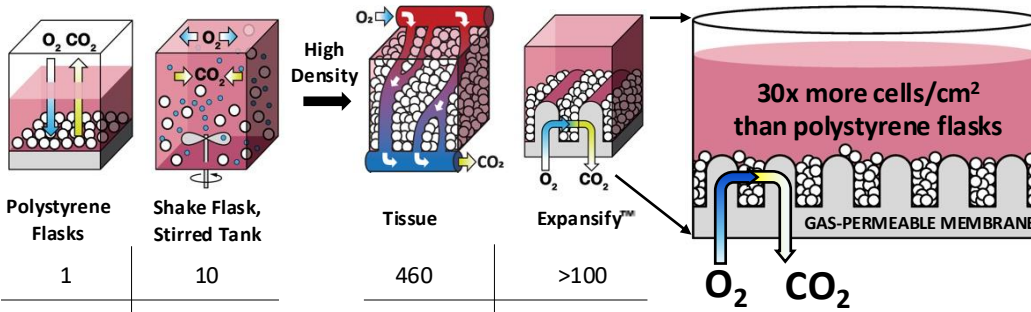


XDemics

Expanding possibilities in viral production.

Overcoming the O₂ bottleneck enables tissue-like cell density *in vitro*

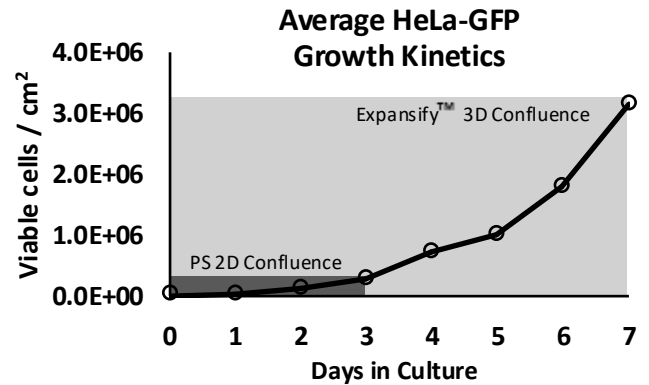
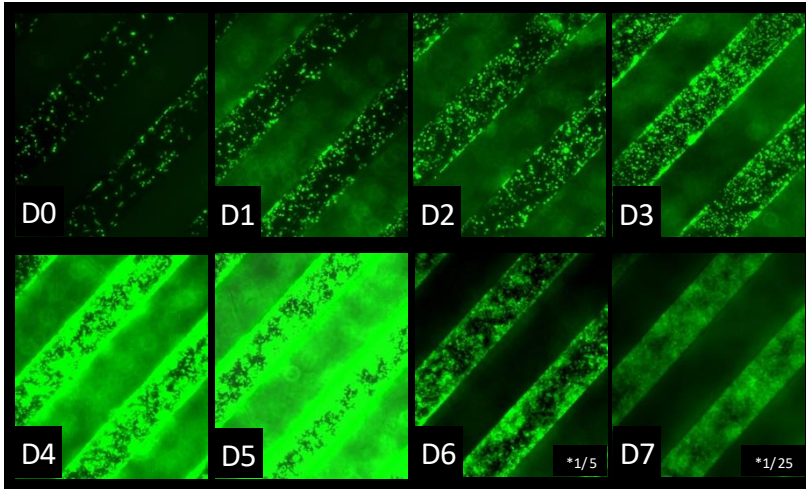
Expansify™ respiring cultureware features a gas-permeable membrane engineered for optimal oxygenation to enable intensified 3D culture of adherent, spheroid, or suspension cells.



Expansify™ enables:

- Optimal oxygenation
- Shear-free environment
- Cell retention
- Easy media exchange
- Linear scalability
- 3D culture

	Polystyrene Flasks	Shake Flask, Stirred Tank	Tissue	Expansify™
Mammalian Cells (1E6 cells / mL)	1	10	460	>100
O ₂ Turnovers, k_{La} (1 / hr)	0.5	5	118	>100

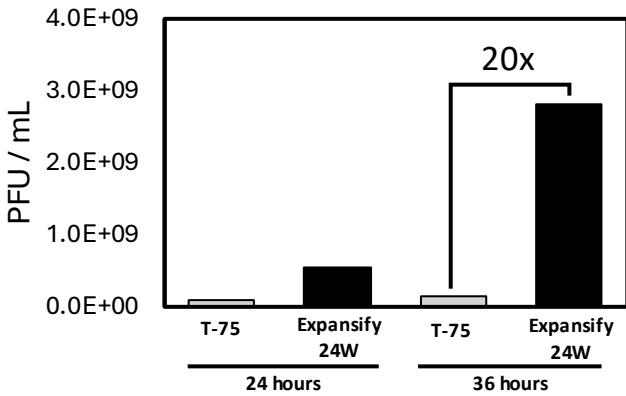
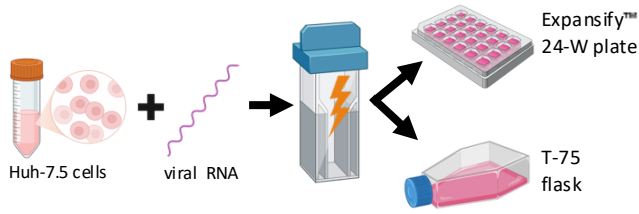


HeLa-GFP cultured in Expansify™ plates achieve >100-fold expansion in 1 week (D0= 2.6E4 cells/cm²; D7= 3.0E6 cells/cm²). *Fluorescence exposure reduced by 1/5 and 1/25 to stay within sensor range.

Expansify™ Plate and Tray Product Line

Yield (per cm ²)	96-Well Launch 2026	24-Well Available Now	6-Well Launch 2027	Single-Well Available Now	Gigacell™ RUO Tray Launch 2026 (Beta Units H1)
Expansify™: >3E6 cells					
Plates / Incubator	300	300	300	300	20
Total Cells (e.g. HEK293T)	1 million per well	8 million per well	35 million per well	250 million per plate	>1 billion per tray
Polystyrene: ~1E5 cells	 16 x 6-well plates	 24 x T-75	 6-9 x T-225	 11 x T-225 1.5 x 1720 cm ² flask	 44x T-225 2x 10-stack

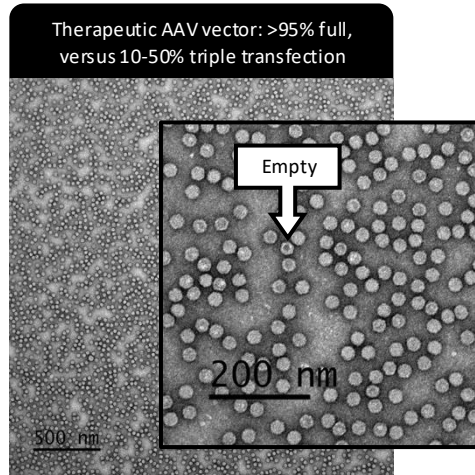
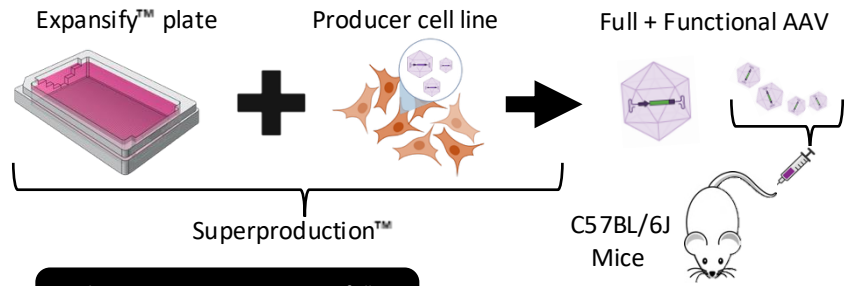
Electroporation: YF Virus



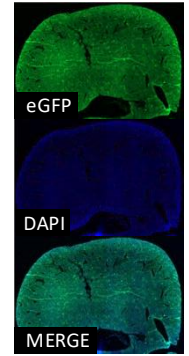
Data generated by Alison Ashbrook of the Charles Rice Laboratory (Nobel Prize, Medicine 2020), Rockefeller University

YFV-induced lethality in mice requires concentrated viral doses. Expansify™ produces pre-concentrated high titer inoculums (typical 20-40x), overcoming experimental limitations of flask-based production.

Producer Cell Lines: AAV



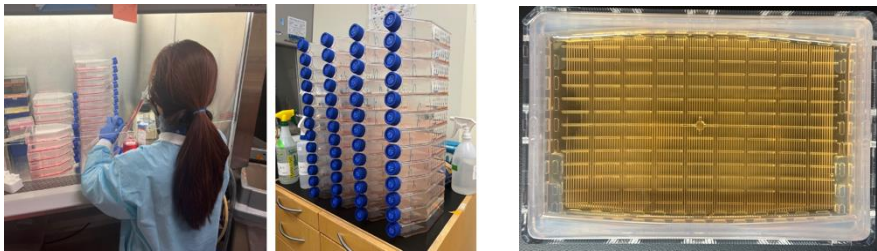
TEM of AAV2 post-affinity purification. No downstream enrichment for intact viral genomes.



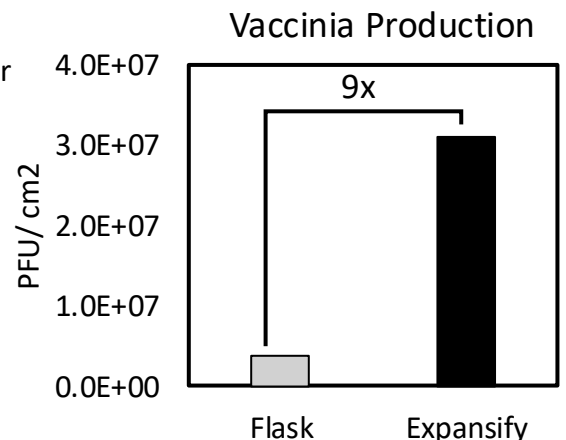
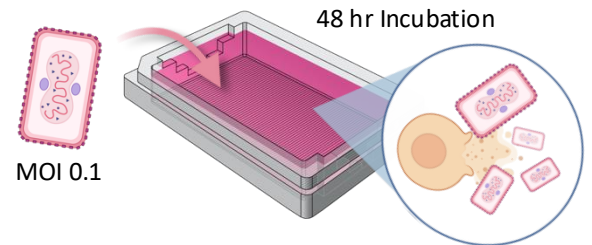
Liver 4 Weeks Post IV
Confocal Fluorescence Microscopy
1E11 AAV2-eGFP / mouse
~ 4E12 vg/kg (n=6)

High-density biomimetic environment supports exceptional production from AAV producer cell lines.

Replication Competent Virus: Vaccinia



- 10x increased cell density
- 20x reduction in flasks
- Simplified workflow
- Production intensification
- 10x fewer opening events
- Superior utilization of incubator space



Increased vaccinia viral titers from 3.6E6 PFU/cm² (22.9 PFU/cell) in polystyrene to 3.1E7 PFU/cm² (37.5 PFU/cell) in Expansify™ respiring cultureware.

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