



LYRIC BIO

Complex Human Therapeutics Manufacturing



LYRIC BIO is building next-generation
biomanufacturing with proprietary human
tissue engineering technology

Executive Summary

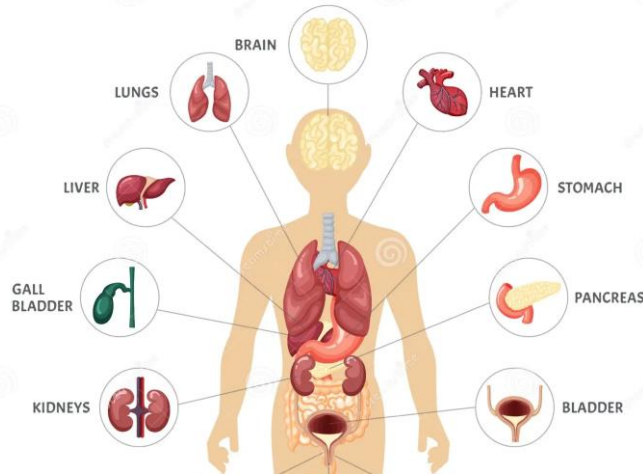
- Lyric is developing bioreactors culturing tissue (vs. cells in suspension) to massively scale efficiency and capabilities of biomanufacturing.
- Lyric's first bioreactors mimic lymph node tissue, allowing for high-density B cell culture (1-2 B cells/mL) and kilograms of protein from a 150 mL bioreactor.
- These B cells can be stimulated to produce large quantities of diverse antibodies for a cost-efficient Ivlg product, currently a \$15B market completely reliant on human donors.
- Lyric's process will alleviate dependence on donors ~10,000-fold, increase supply, reduce costs 10-100x, and improve quality of Ig therapeutics.
- Lyric Bio spun out of Prellis Biologics with an exclusive license to apply their proprietary tissue engineering technology to develop high-density bioreactors.



Therapeutic Production with Unprecedented Efficiency



Human tissue



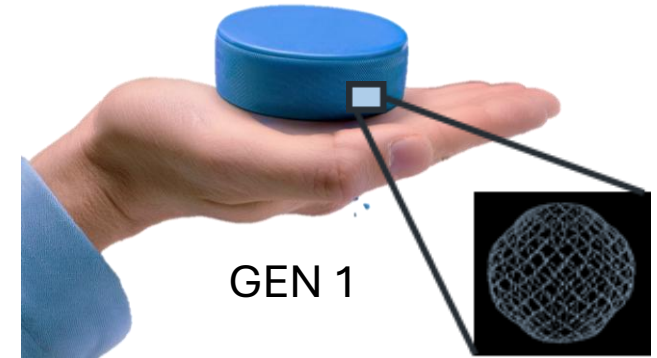
3-5B cells/mL

Vat Bioreactors



~10M cells/mL

Lyric Bioreactors



1-2B cells/mL

Manufacturing Donor Derived Therapies



Improved Efficiency Across Biologics



Mabs \$16B
Industrial Enzymes \$8B
Human Proteins \$4B

Lyric Will Start By Reversing the Donor to Recipient Paradigm LYRIC

for the \$15B Immunoglobulin Market

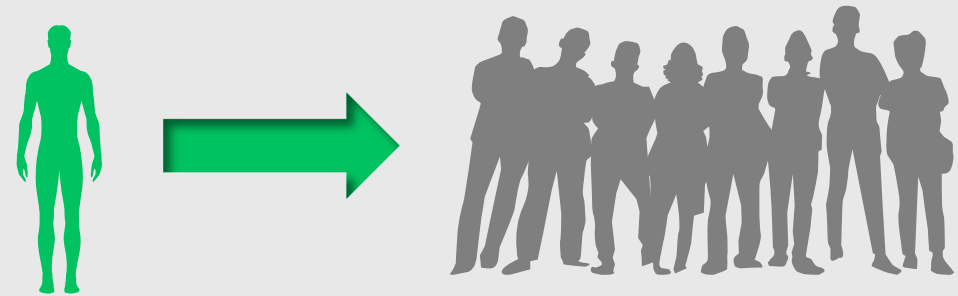
~10,000 fold reduction in donors

Current Process



~7-10 donors per Ivlg dose

LYRIC Process

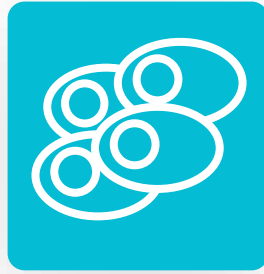


~1,000 Ivlg doses per donor

One Donor, One Bioreactor, Thousands of Doses



B cells
(one donor)



Grow B cell
populations



Seed and expand
in a high-density
bioreactor



Stimulate B cells
to produce
immunoglobulin



Collect Ig
(est. >1,000 doses)

Est. 10x – 100x Lower Cost

Estimated industry costs for plasma collection
vs Ig production excluding purification costs

Stabilize Supply

Est. 5,000 donors necessary to address total
current US market

Ig is a \$15B Global Market Limited by Reliance on Plasma



Reliance on human plasma donations leads to supply instability



High-overhead due to cost of collecting human plasma

High Cost

~\$56,327- \$277,119
per year per patient

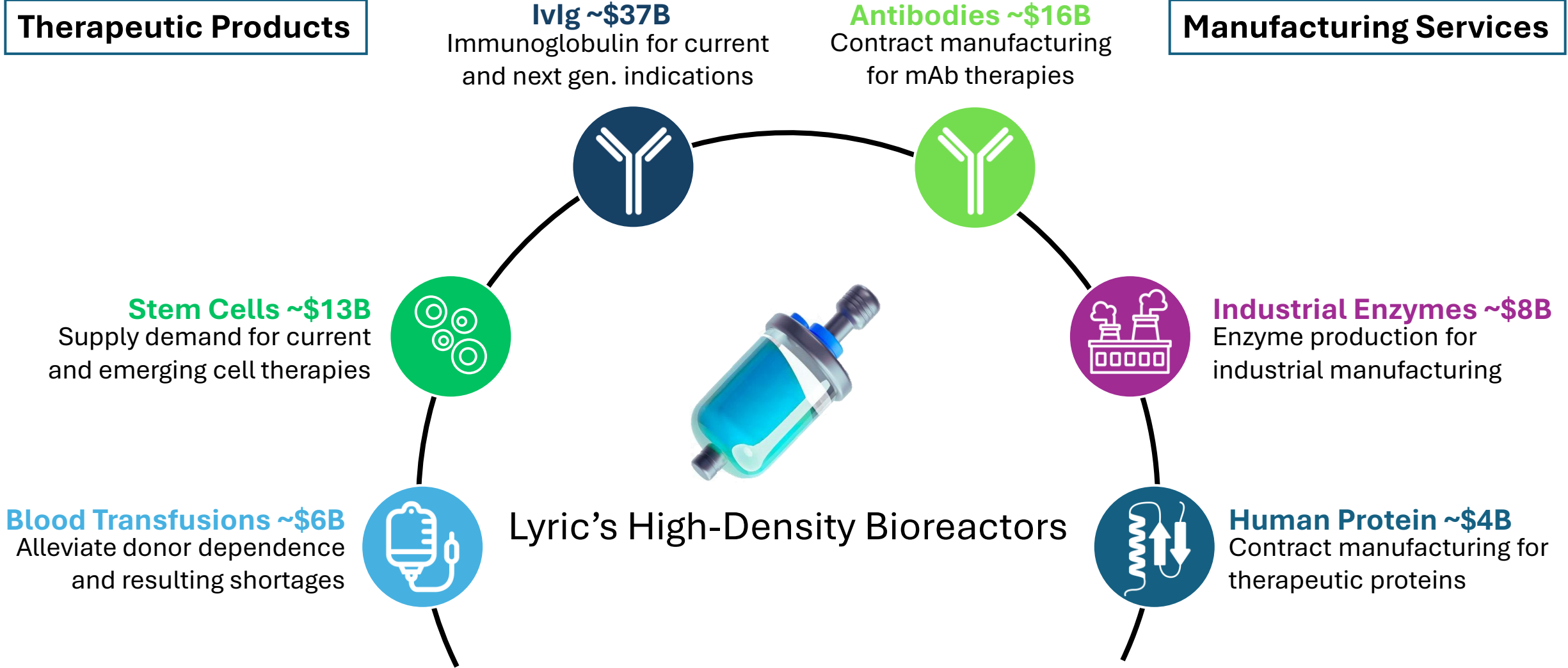
Market Shortages

Market has faced repeated shortages over the last two decades

Quality Control

High variability in current donor derived process

Billions in Value Enabled with Lyric's Bioreactors



Founding Team



Kayj Shannon
Co-Founder & CEO
10 years at large Pharma
and start-up companies



Melanie Matheu, PhD
Co-Founder & CSO
Prellis Biologics, Inc.
Founder and CTO



University of California
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Erin Stephens, PhD
Scientific Director
Prellis Biologics, Inc.
VP of Tissue Engineering



Cornell University



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