



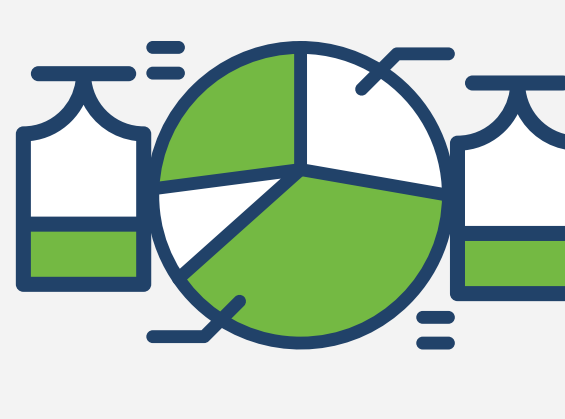

Advancing Vaccine Excellence

Safer. Scalable. Sustainable.

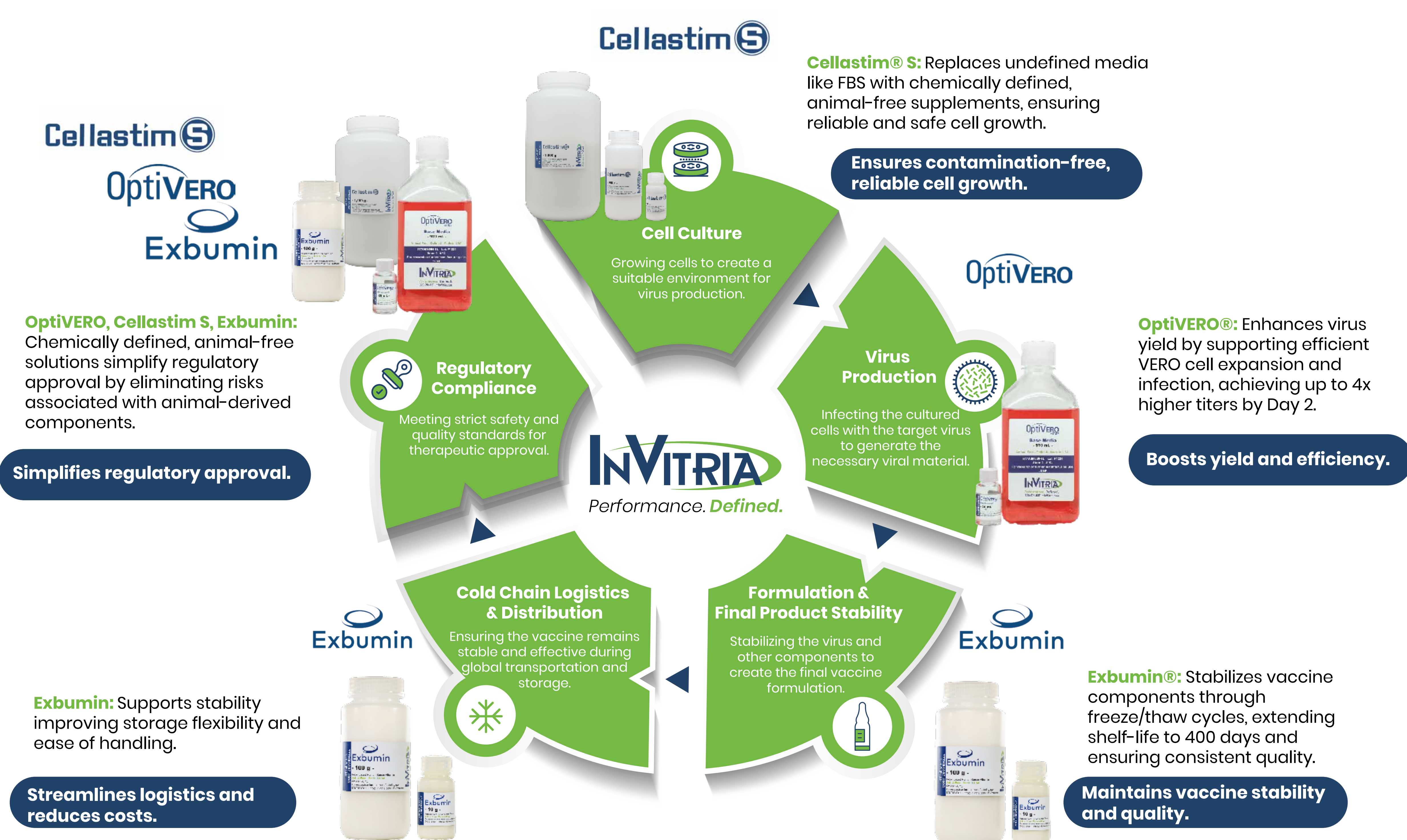
Transforming vaccine research, development & production with recombinant solutions that protect patients and improve outcomes.

Risks of Animal- & Human-Derived Serum in Vaccine Production

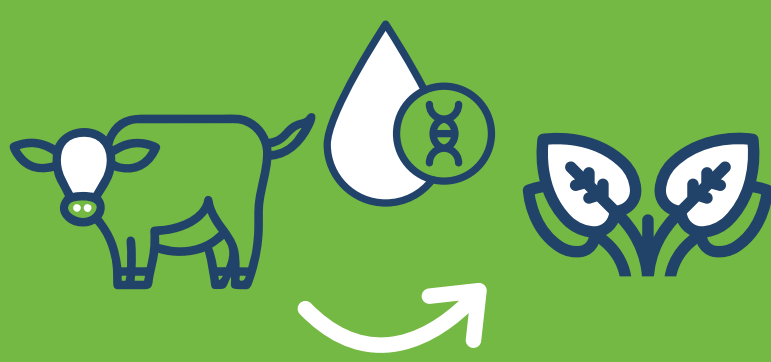
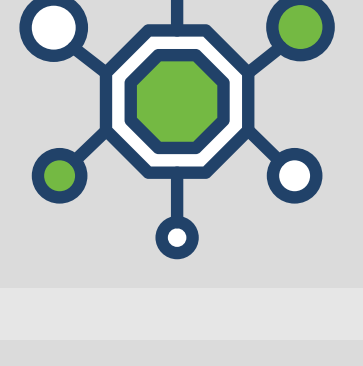







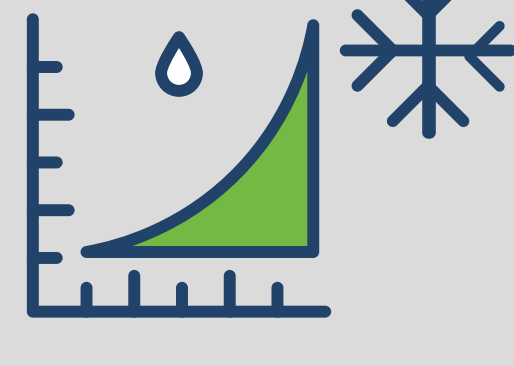











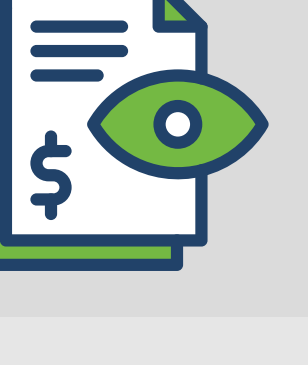
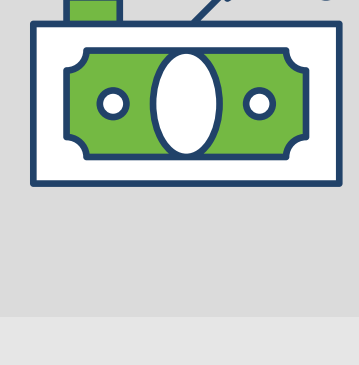

The use of animal & human-derived serum in vaccine production, particularly for growing cells in culture, has been a cornerstone of biotechnology for many years. However, there are associated risks that researchers and manufacturers need to manage carefully. These include:

 <p>Pathogenic Contaminants</p> <p>Animal- & human-based serum may contain viruses, prions, mycoplasma, or other microorganisms, which can infect cell cultures and compromise vaccine safety.</p> <p>Diseases and Infections</p>	 <p>Immune Reactions</p> <p>Animal- & human-based serum can carry endotoxins, and residual animal proteins, which can cause adverse immune reactions.</p> <p>Immune Reactions</p>	 <p>Batch Variability</p> <p>The composition of animal- & human-based serum can vary significantly between batches, leading to inconsistencies in cell growth and vaccine production, which can affect the efficacy and quality of the vaccine.</p> <p>Inconsistent Results</p>	 <p>Inconsistent Supply</p> <p>Animal- & human-derived components face increasing supply challenges, making it difficult to ensure reliable and scalable global vaccine production.</p> <p>Scalability Challenges</p>
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Optimizing Vaccine Workflows with InVitria Solutions



Why It Matters

SOLUTION	PRODUCT	HOW IT WORKS	BENEFIT	PATIENT IMPACT
Replace Risky Animal and Blood-Derived Components 	Cellastim S OptiVERO Exbumin	Replaces animal-derived supplements with chemically defined, contamination-free alternatives. 	Eliminates risks of contamination (e.g., viruses, prions) and variability. 	Reduces the chance of adverse reactions. 
Enhance Performance and Yield 	OptiVERO	Improves virus production and reduces time to harvest with up to 4x higher titers by day 2. 4x 	Delivers consistent results and accelerates vaccine manufacturing timelines. 	Faster access to life-saving vaccines. 
Stabilize Virus and Vaccine Components 	Exbumin	Preserves vaccine integrity through freeze/thaw cycles, extending shelf life and reducing waste. 	Maintains high yield and reduces product loss during storage. 	Guarantees the safety and efficacy of administered doses. 
Optimize Cold Chain Logistics 	Exbumin	Extends stability to 400 days at 2-8°C, reducing reliance on -80°C storage. 400 	Enhanced stability simplifies storage, handling, logistics, and reduces cold chain costs. 	Ensures consistent quality, even in remote areas. 
Support Regulatory Compliance 	Cellastim S OptiVERO Exbumin	Provides regulatory-friendly, animal-origin-free solutions with robust documentation. 	Accelerates approval processes and eases global compliance. 	Reduces the time-to-market for vaccine manufacturers. 
Lower Costs While Enhancing Safety 	Exbumin OptiVERO	Improves efficiency manufacturing by reducing waste and increasing productivity. 	Lowers cost per dose while maintaining product quality. 	Affordable therapies reach more patients. 

Recombinant



Chemically defined, animal-free recombinant proteins ensure consistency and quality in biomanufacturing.

Safe



Eliminates contamination risks with animal origin-free, regulatory-friendly solutions.

Scalable



Designed to scale from research to production effortlessly.

Sustainable



Plant-based, sustainable solutions reduce environmental impact.

Accelerate Your Vaccine Innovation with InVitria Solutions at www.invitria.com

