



# Novel Dual-Plasmid Transfection System

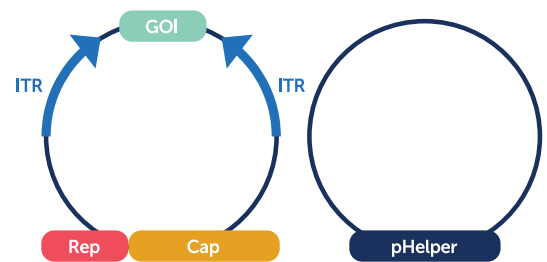


The Dual-Plasmid system resolves some of the key manufacturing challenges faced by AAV developers

Our team of experts at Oxford Biomedica have developed a proprietary 'plug and play' Dual-Plasmid system for transient transfection for effective AAV-based gene therapies resulting in:

- ✓ Higher titre
- ✓ High product quality
- ✓ Proven scalability

Oxford Biomedica's Dual Plasmid System



Our novel Dual-Plasmid system optimizes performance and quality

Continuously exploring opportunities for titre improvement

Today  
Novel Dual Plasmid transfection

Up to  
**E15 vg/L**

2020  
Optimized plasmid/construct design

Up to  
**E14 vg/L**

2019  
Improved GMP execution with internal MFG facility

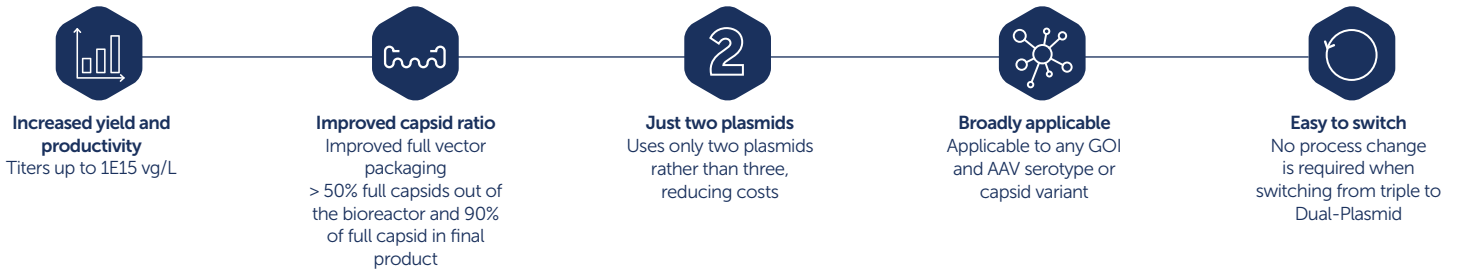
Up to  
**E13 vg/L**

2018  
Triple transfection reference

Up to  
**E13 vg/L**

Titre is construct and serotype dependent

## Advantages of our Dual-Plasmid system include:



## An optimised configuration to outperform traditional triple-plasmid system

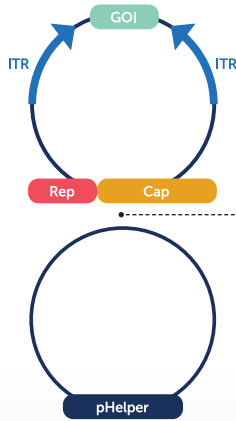
### Traditional triple-plasmid system

GOI, Helper and Rep Cap



### Oxford Biomedica Dual-Plasmid system

GOI + Rep Cap and Helper



#### Dual-Plasmid System delivers

Same sequence, different configuration

Performance and quality

Consistency, comparability and scalability

#### Client benefits

Improved downstream performance

High productivity and improved safety profile

Reliable technology proven in GMP manufacturing



- ✓ No change in RepCap and GOI (Gene of Interest) DNA sequences, and the pHelper plasmid is the same: the conversion from the triple-plasmid to the Dual-Plasmid system is straightforward
- ✓ The Dual-Plasmid system, together with our proprietary transfection process increases bioreactor vg titer up to 10-fold over current industry standard. The process has been successfully scaled up to 2,000L and has been proven to deliver up to 1.5E17 total vgs at 500L scale



**inAAVate™**

We are a quality and innovation-led CDMO with over 25 years of experience, committed to helping our clients deliver cell and gene therapies that transform patients' lives.

We offer end-to-end capabilities, from plasmid design and optimisation, to clinical and commercial GMP manufacturing, accompanied by robust control systems, analytical methods and deep regulatory knowledge.

**Let's do something life-changing together**

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