



# LentiVector® platform

The first and leading commercial lentiviral-based gene delivery system



## The LentiVector® platform

Protected by extensive IP and know-how

### Cell and vector engineering

Optimised cell lines for simplified and scalable manufacturing  
Next generation vectors with pseudotyping expertise  
Access to EIAV and HIV-1 minimal vector systems with key safety features

### Process development

State-of-the-art facilities spread over 12,000 feet and 2 sites  
Over 20 years' experience in manufacturing  
Serum-free suspension bioreactor process

### Process development

### Early clinical and commercial manufacturing

### Cell and vector engineering

### Analytics

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Analytical methods recognised by regulatory authorities  
Quality systems ensuring compliant release of batches  
Automated systems increase efficiency and reproducibility

## LentiVector

### SecNuc™

Efficient clearance of residual DNA during vector production  
Streamlines vector production and reduces cost of goods

### SecNuc™

### Proprietary manufacturing technologies

### LentiStable™

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Inducible stable packaging and producer cell lines  
Simplified, cost-effective and scalable manufacturing process

### TRiPSystem™

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Repression of transgene during vector production  
Maximises yields and improves product quality

**Oxford Biomedica's LentiVector® platform enables the successful development of breakthrough gene and cell-based medicines.**

We have a long and broad clinical and commercial track record in the gene therapy field spanning 22 years. Our data demonstrates over seven years of stable, dose dependent gene expression in patients after direct *in vivo* administration. Several hundreds of patients have now received *ex vivo* and *in vivo* treatment with therapies that use our vectors.

Our LentiVector® platform has delivered the first FDA and EMA approved CAR-T cell therapy.



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### An integrated technology platform

Our partners have access to our LentiVector® platform that includes a class leading suite of technologies to improve efficiency, scalability and quality of vector production. These proprietary manufacturing technologies can also be licensed independently.

Our LentiVector® platform is widely recognised as a leading solution in gene therapy and it is the world's first available FDA approved commercial supply of lentiviral vectors.

### Advantages of lentiviral vectors over other vectors, such as AAV

- Deliver large therapeutic payloads (up to 10kb) into target cells.
- Provide permanent modification of dividing and non-dividing cells
- No pre-existing immunity of lentiviral vectors makes the platform safe

### Our LentiVector® platform is designed to give the highest safety, quality and efficacy

Our vectors are optimised and well-characterised, with quality attributes that satisfy international regulatory expectations, and are known by key regulatory authorities. Our "minimal" lentiviral vectors have key safety features, such as self-inactivating LTRs, mutated WPRE and codon optimised Gag/Pol to minimise the risk of recombination.

### Continuous innovation

We continuously innovate to improve our LentiVector® platform by;

- Engineering our proprietary cell lines and vectors to improve bioprocessing yield
- Developing new analytical methods to increase efficiency and quality
- Investing in automation and state-of-the-art manufacturing technologies, such as a serum-free suspension bioreactor processes
- Using in silico design tools and machine learning to drive development and innovation
- Collaborating with innovative companies to integrate cutting-edge technologies into the LentiVector® platform

## 1st

First in the world to administer lentiviral vector gene therapy directly *in vivo* to patients

First approved advanced therapy in the US and Europe using our platform

First commercial supplier of lentiviral vector in the world

### Licensing Terms

We license our patents and know-how to our partners, giving them access to unique proprietary technologies which they use to develop their products.

Our licensing structure offers considerable flexibility to our partners, including the right to carry out tech transfer of the process to their facilities under certain conditions.

### Intellectual Property

Protected by extensive know-how and multiple patent families covering vector technologies and manufacturing processes

For more information please contact:

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