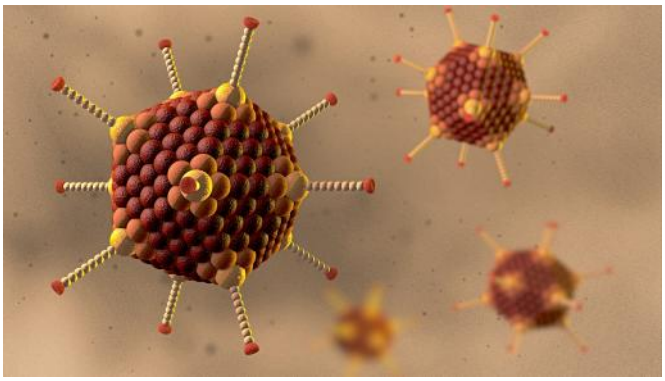
PROJECT NUMBER

21805

Semi-synthetic promoters for adenoviral-vectored transgene expression

A panel of compact, semi-synthetic promoters optimised for use in adenoviral vectors. By combining computationally designed synthetic enhancer elements with a compact core promoter, the technology enables robust transgene expression while significantly reducing promoter size. The synthetic enhancers are modular and can be paired with different core promoters, and span a range of activities, offering flexibility across a range of vector designs. This approach supports the inclusion of larger or multiple transgenes within a single vector, helping overcome payload limitations in adenoviral-vectored vaccine and gene delivery applications.

Applications: Adenovirus vectored vaccines, gene therapy vectors, viral vector engineering, transgene expression



Features	Benefits
Compact promoter format optimised for payload-constrained vectors	Increases available vector space for larger genetic payloads or multiple expression cassettes
Semi-synthetic architecture combining synthetic enhancers with a compact core promoter	Matches the expression strength of industry-standard promoters despite the significantly reduced genomic footprint

Features	Benefits
Modular enhancers that span a range of activities and pair with different core promoters	Enables tuning of expression strength and flexibility across vector designs
Engineered to minimise sequence homology between enhancer variants	Improves genetic stability and reduces recombination risk in multi-cassette vectors
Compatible with viral-vectored vaccine and gene delivery platforms	Provides a versatile toolkit for next-generation viral vector design

Patented and Available for

- Co-development
- Consulting
- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.