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Novel Adenoviral Vector System for Gene Delivery

A new technology enables the replication of bovine adenoviral vectors with a full E1 region deletion, substantially increasing foreign gene cassette capacity for more efficient gene delivery and vaccine production.

In the current versions of bovine adenoviral vector system, only .6 kb deletion of the E1 region can be made in the bovine cell line. Various versions of less prevalent human adenoviral vectors are tested for gene delivery and vaccine production. The problem with these current versions is that they do not provide the best immune responses. They are also not as efficient as they could be. There is a need for a new technology that allows for better responses and increases the efficiency of adenoviral vector mediated gene delivery.

Researchers at Purdue University have developed a new technology that supports the replication of bovine adenoviral vector with full E1 region deleted. This allows foreign gene cassette capacity in the bovine adenoviral vector to be extended by 2kb. Such deletion would allow for a much greater insert capacity of the foreign gene cassette containing one or more genes. This new technology could potentially open the door for many new technologies pertaining to adenoviral vector mediated gene delivery and vaccine production.

Advantages:

-Provides better responses

-More efficient

Potential Applications:

-Gene delivery

-Adenoviral vectors

-Gene therapy

Technology ID

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Category

Biotechnology & Life Sciences/Synthetic Biology & Genetic Engineering

Biotechnology & Life Sciences/Cell & Gene Therapy Platforms

Pharmaceuticals/Drug Delivery & Formulations

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