Docket #: S95-004

Rapid, Stable, High titre production of Recombinant Retrovirus

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This method of rapid production of high titre retrovirus for large scale production involves a retrovirus construct with an Epstein Barr Virus origin of replication and EBNA protein.

The nuclear replication and retention functions of the Epstein Barr virus have been used to maintain retroviral vectors episomally with in human-based retroviral packaging cell lines. These hybrid EBV/retroviral vectors are capable of producing helper-free recombinant retovirus as soon as 48 hours, and for at least 30 days, after transfection into 293T-based ecotropic and/or amphotroic retroviral packaging cells. Viral titers greater than 10^7 CFU/ml were obtained after puropycin selection of transfected retrovirus packaging cell lines. This episomal approach to retroviral production circumvents limitations inherent in transient and chromosoally-stable retroviral producer systems thereby affording reproducibly rapid, large scale, high titer retrovirus production.

Innovators

- Todd Kinsella
- Garry Nolan

Licensing Contact

Michael Bellas

Licensing Associate

Email