

ملخص البحث رقم (8)

Title: Comparing residual integration levels of some integration-deficient lentiviral vectors

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Abstract: Lentiviral vectors (LVs) have many advantageous characteristics making them a good choice in the field of gene therapy. Nevertheless, their integration may lead to detrimental effects. To overcome this problem, lentiviral integration can be targeted through using integration-deficient lentiviral vectors (IDLVs). In this study, an integration-proficient lentiviral vector (IPLV) and a battery of IDLVs with single or multiple mutations affecting integration were produced and their integration levels were compared. eGFP time-course experiment and clonogenic assay were used to make these comparisons. It was found that there was not any significant difference between the residual integration of any of the IDLVs used in this study and that of the standard IDLV; D64V-IDLV. It can be concluded that most IDLV integration is mediated by integrase-independent mechanisms.

Keywords: Gene therapy, IDLV, Lentivector, residual integration, triple mutation