

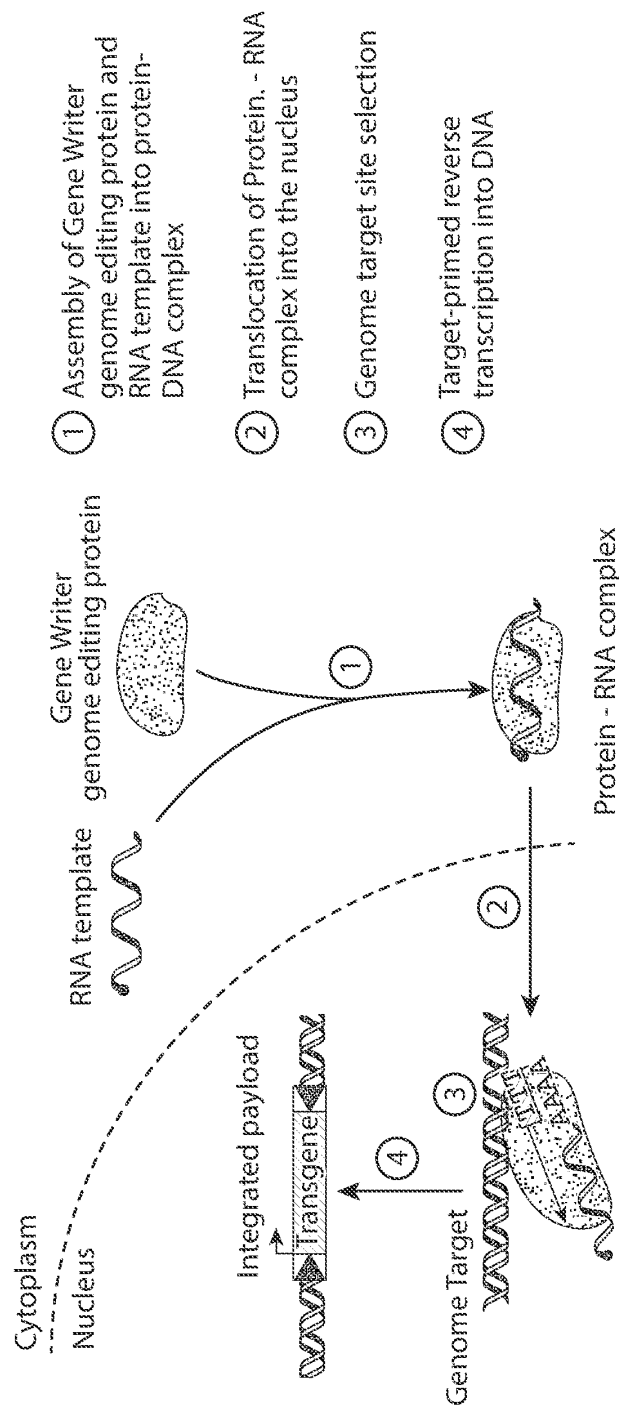


FIG. 1

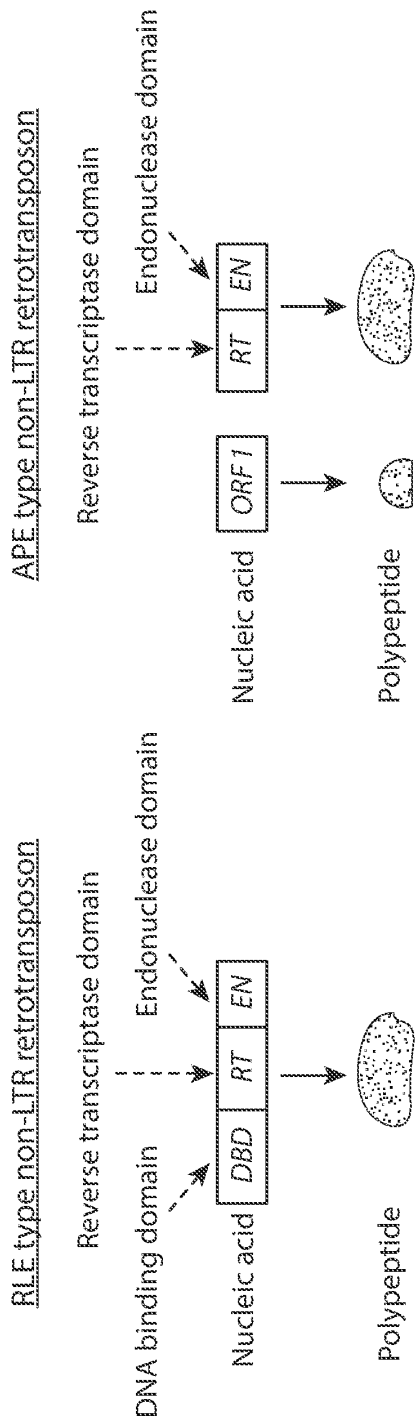


FIG. 2

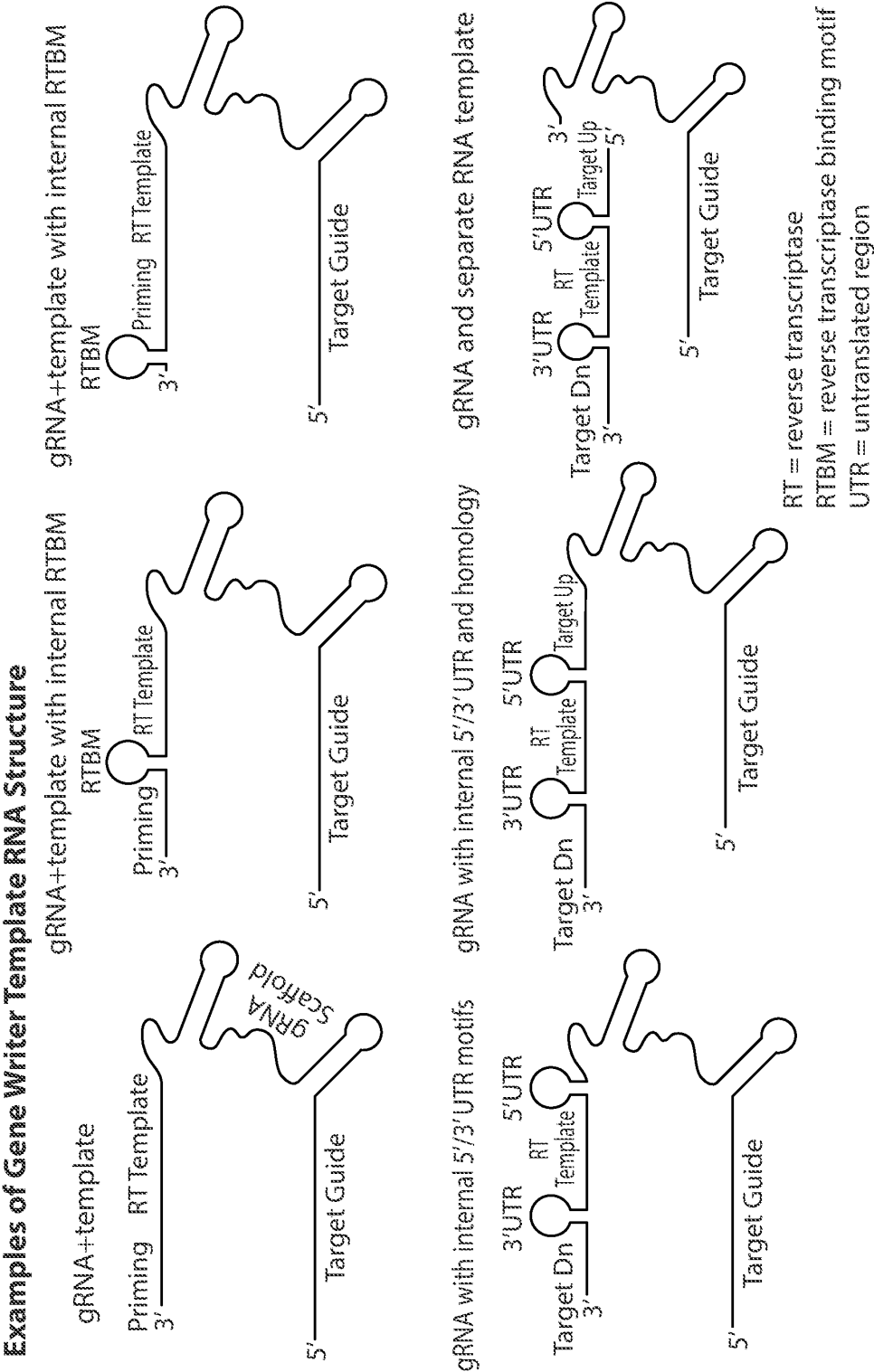


FIG. 3

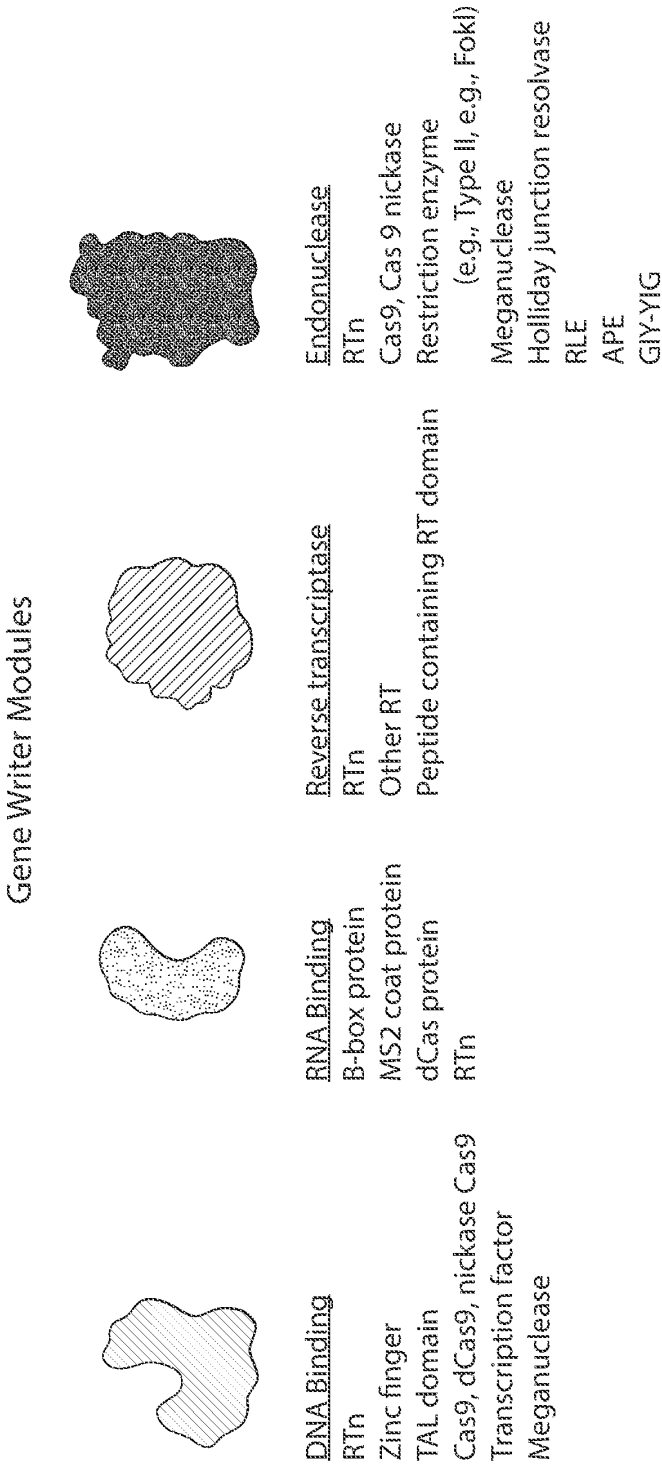


FIG. 4A

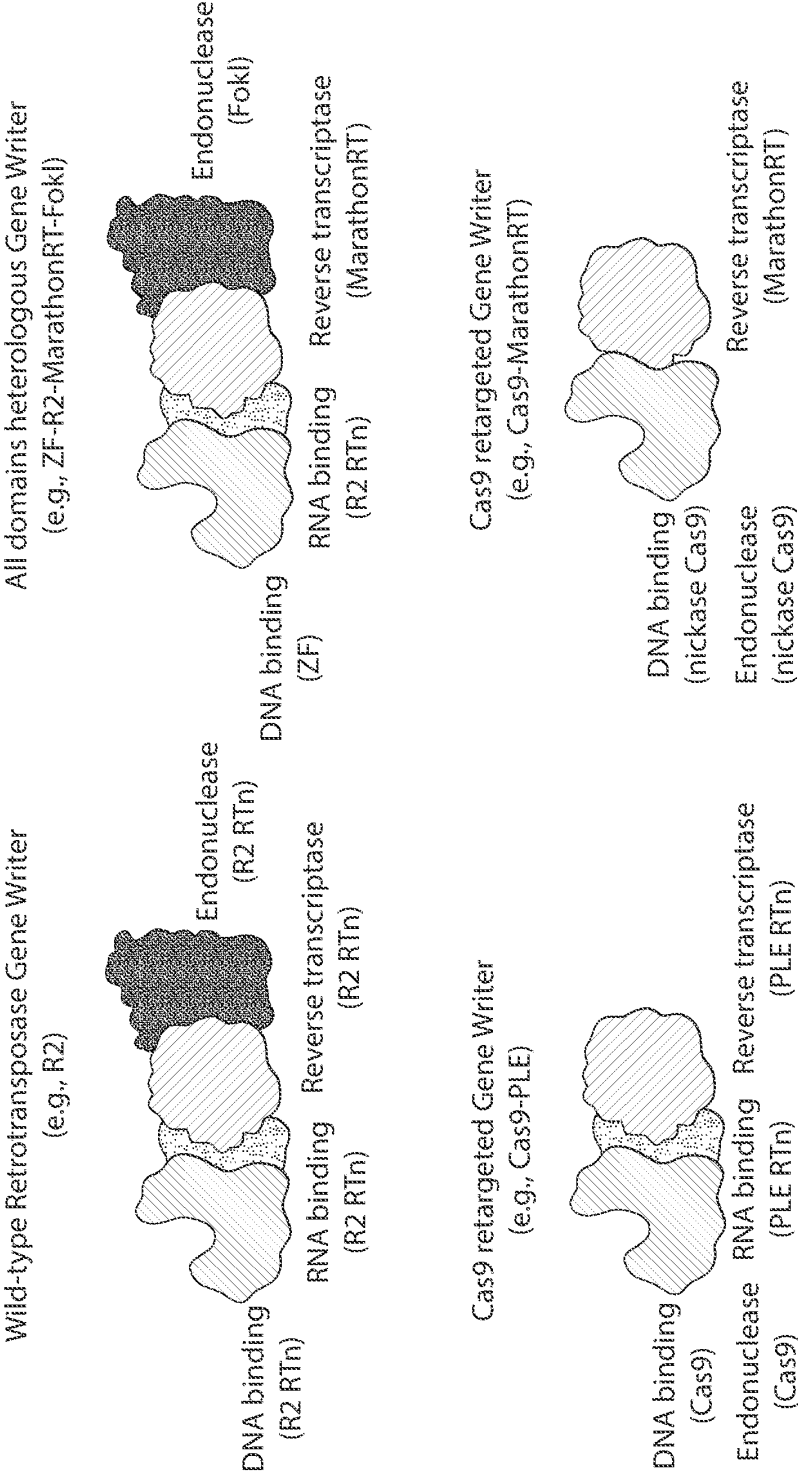


FIG. 4B

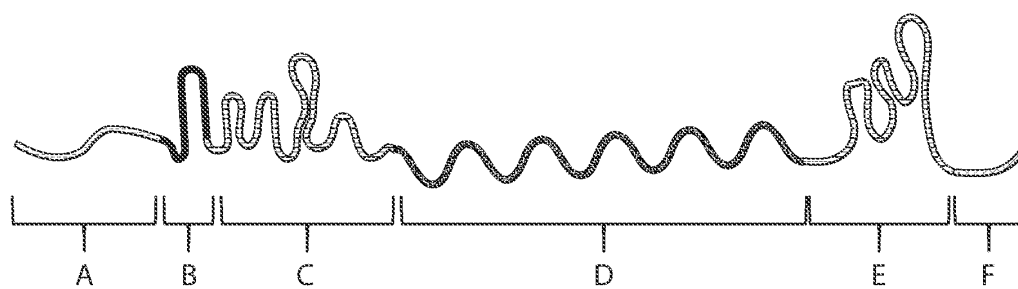


FIG. 5

Module	Function
A: 5'homology arm	The 5'homology arm module is complementary to the DNA sequence 5' to where the GeneWriter system nicks target DNA
B: Ribozyme	The ribozyme module is a sub-part of the 5'UTR sequence of the retrotransposase
C: 5'UTR	The 5'UTR module is the RNA sequence or interacting moiety that the driver of retrotransposase uses in the process of retrotransposition
D: Heterologous object sequence	The heterologous object sequence is an RNA sequence that serves as the template for the GeneWriter polypeptide to insert a desired payload into the targeted genomic location
E: 3'UTR	The 3'UTR module is an RNA sequence or interacting moiety that the GeneWriter polypeptide interacts with to bind to the template RNA molecule that is used in whole and/or in part as a template for retrotransposition
F: 3'homology arm	The 3'homology arm module is complementary to the DNA sequence 3' to where the GeneWriter system nicks target DNA

FIG. 6

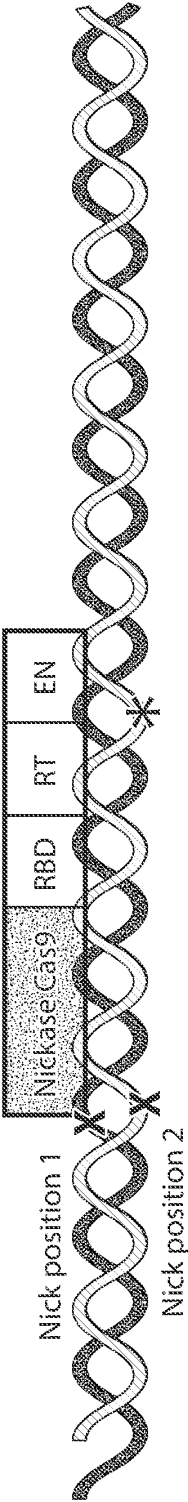


FIG. 7A

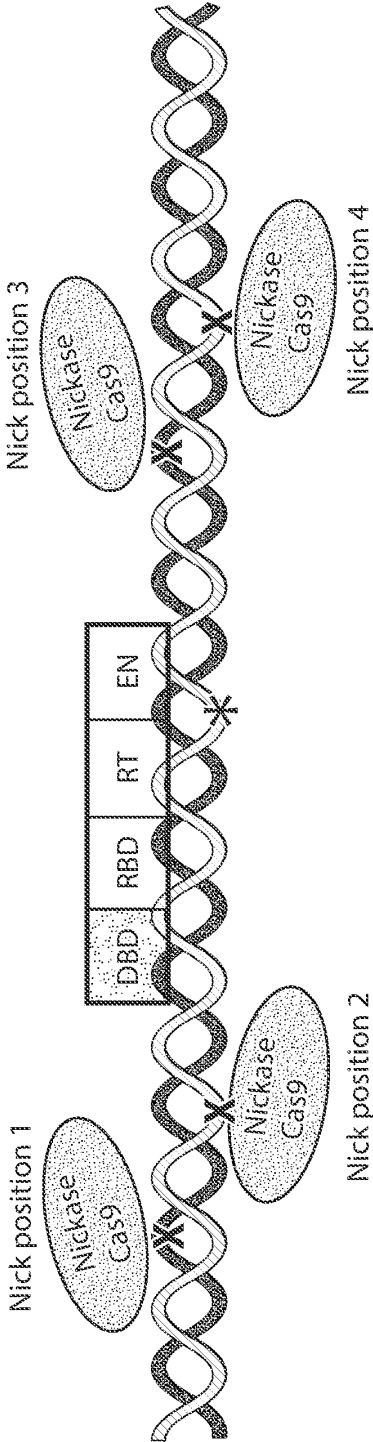


FIG. 7B

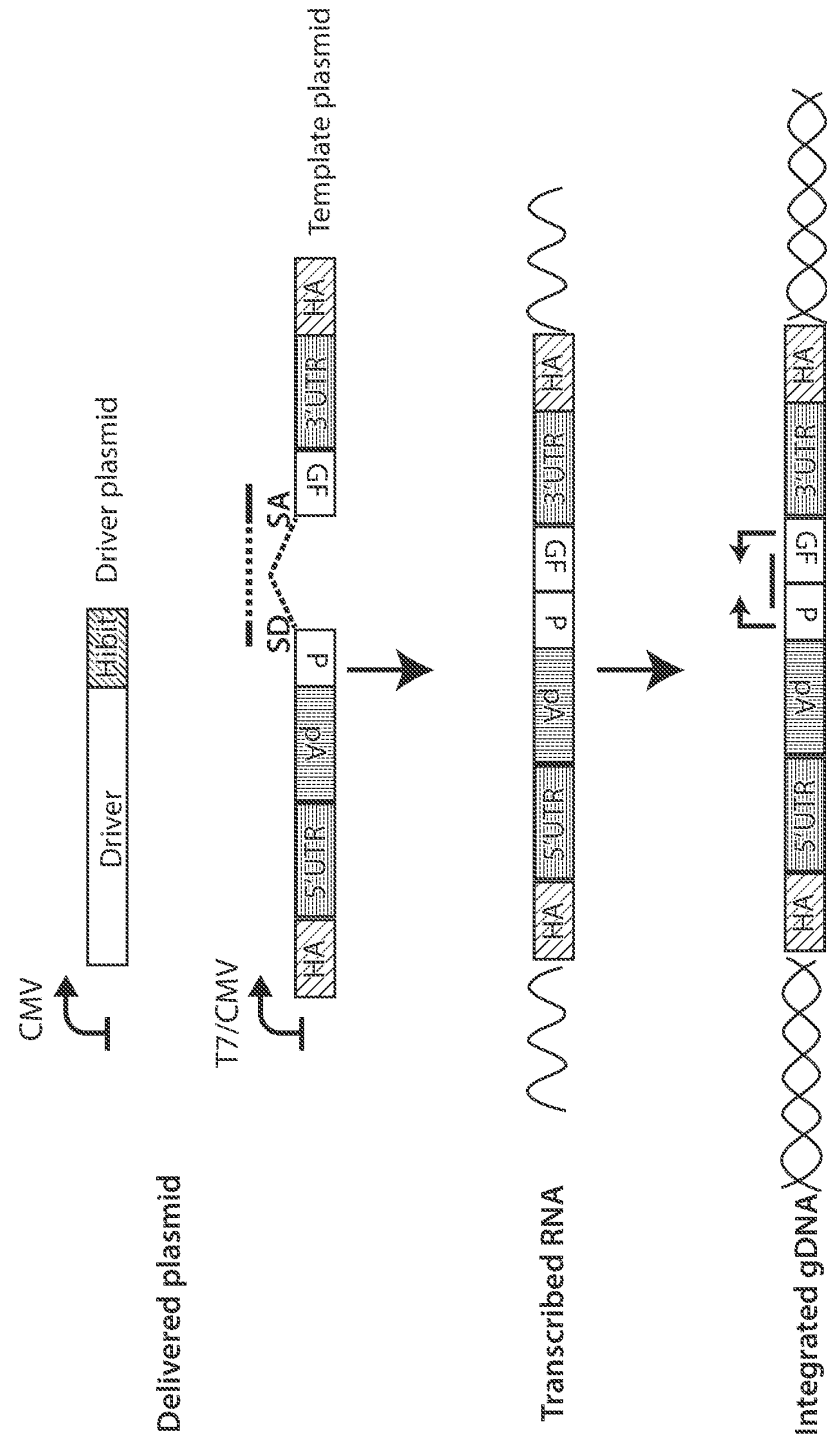


FIG. 8

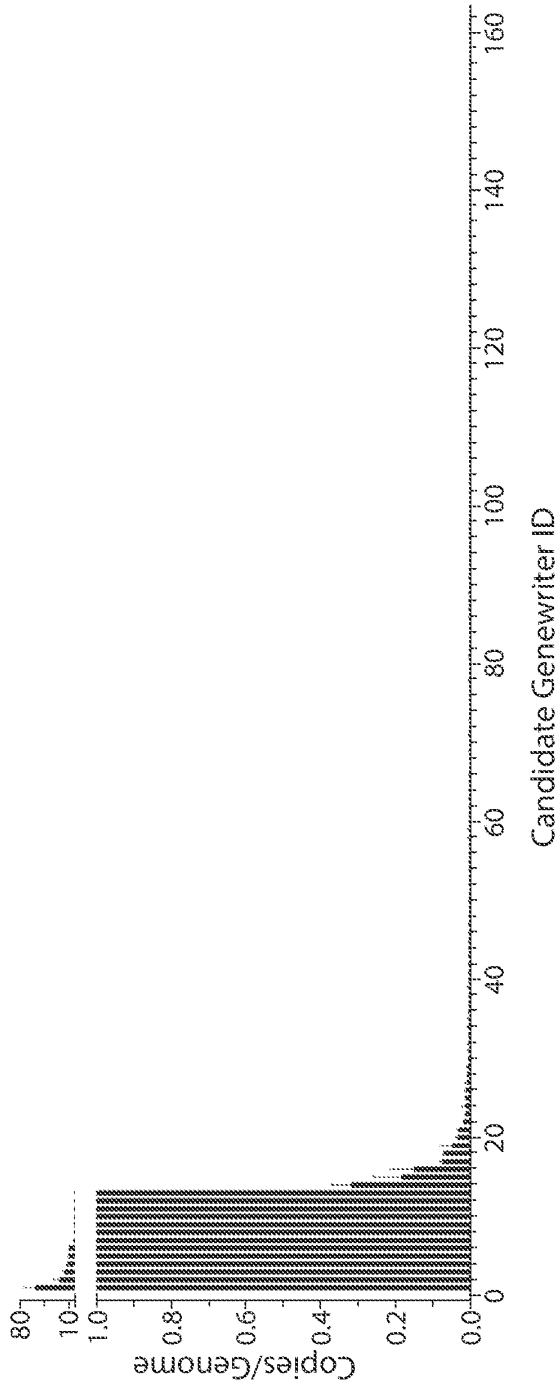


FIG. 9

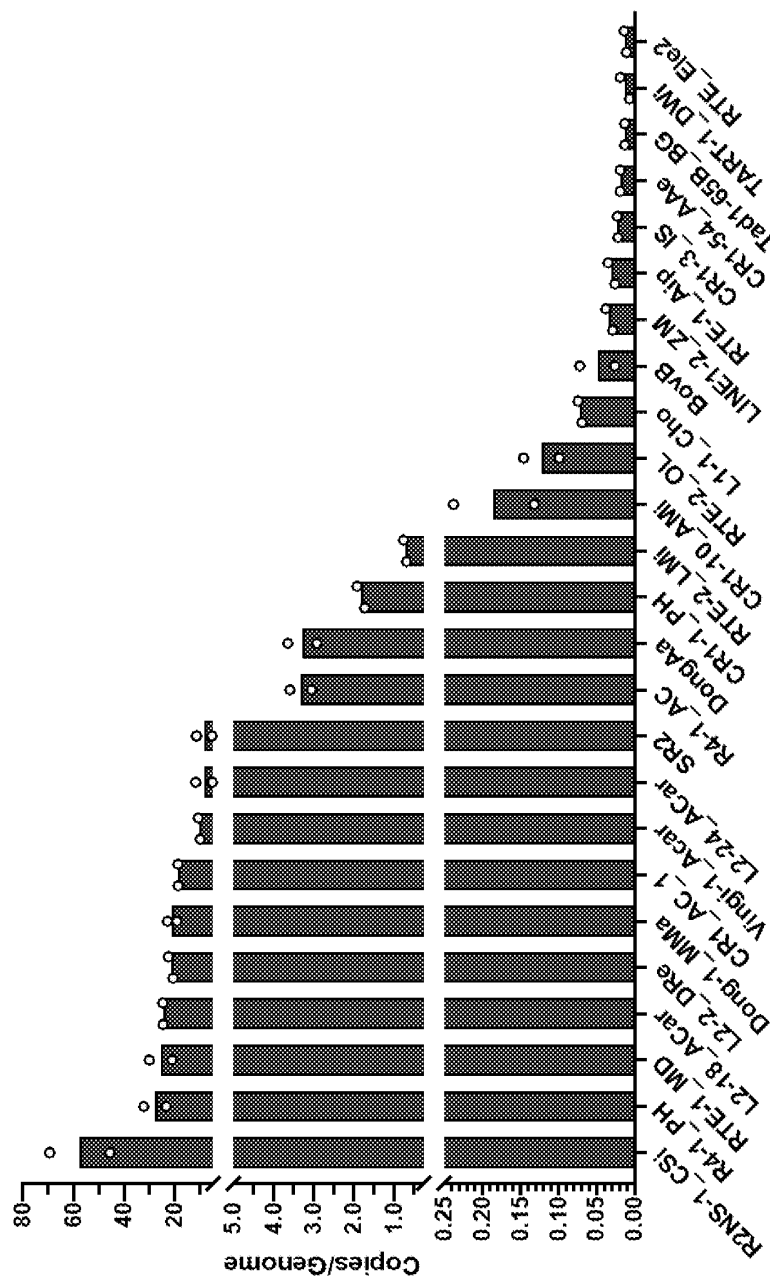


FIG. 10

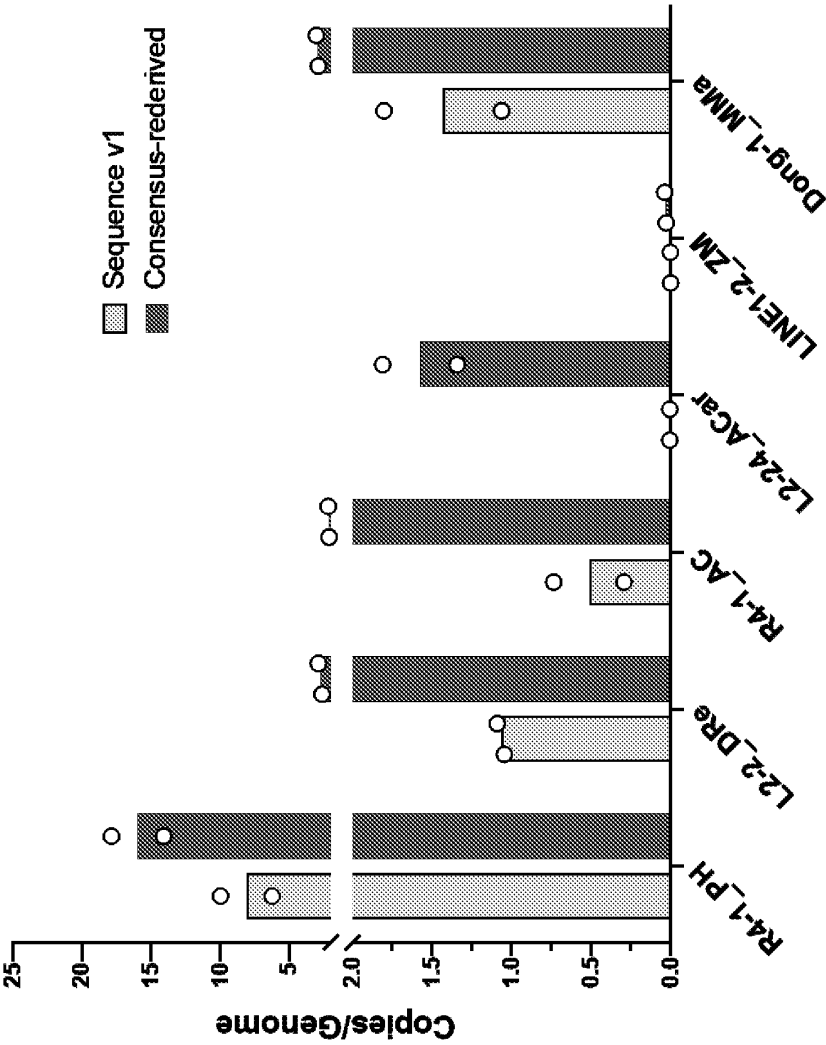


FIG. 11

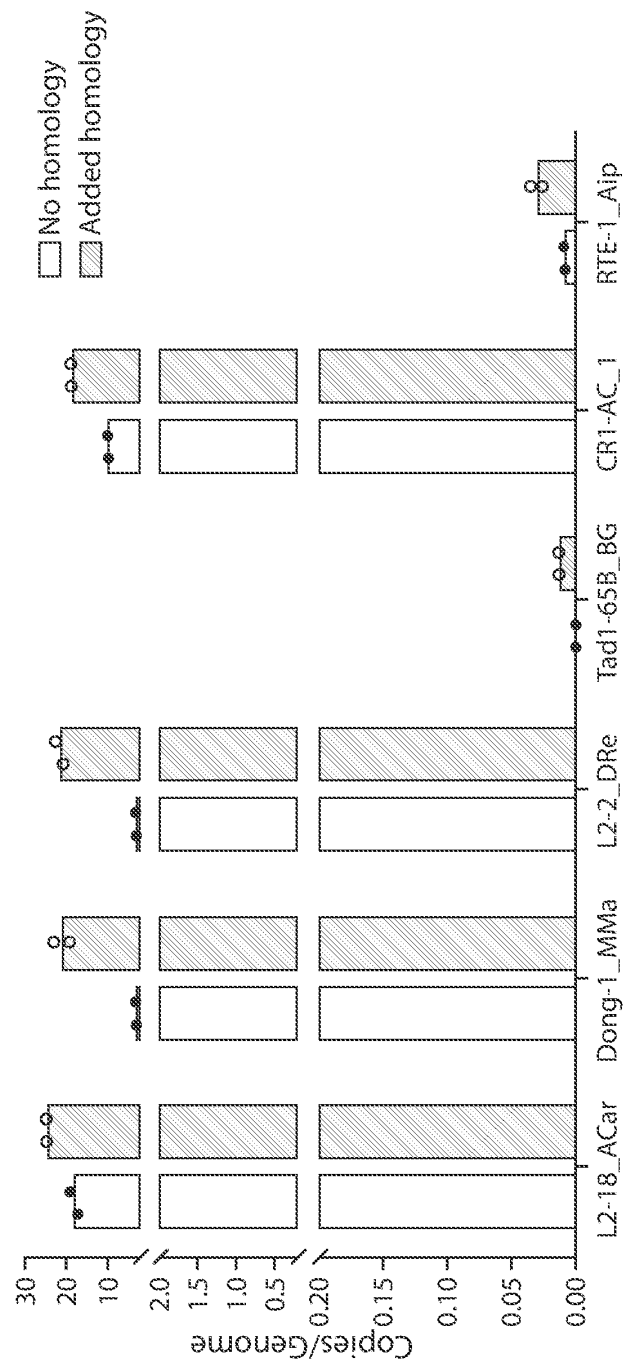


FIG. 12

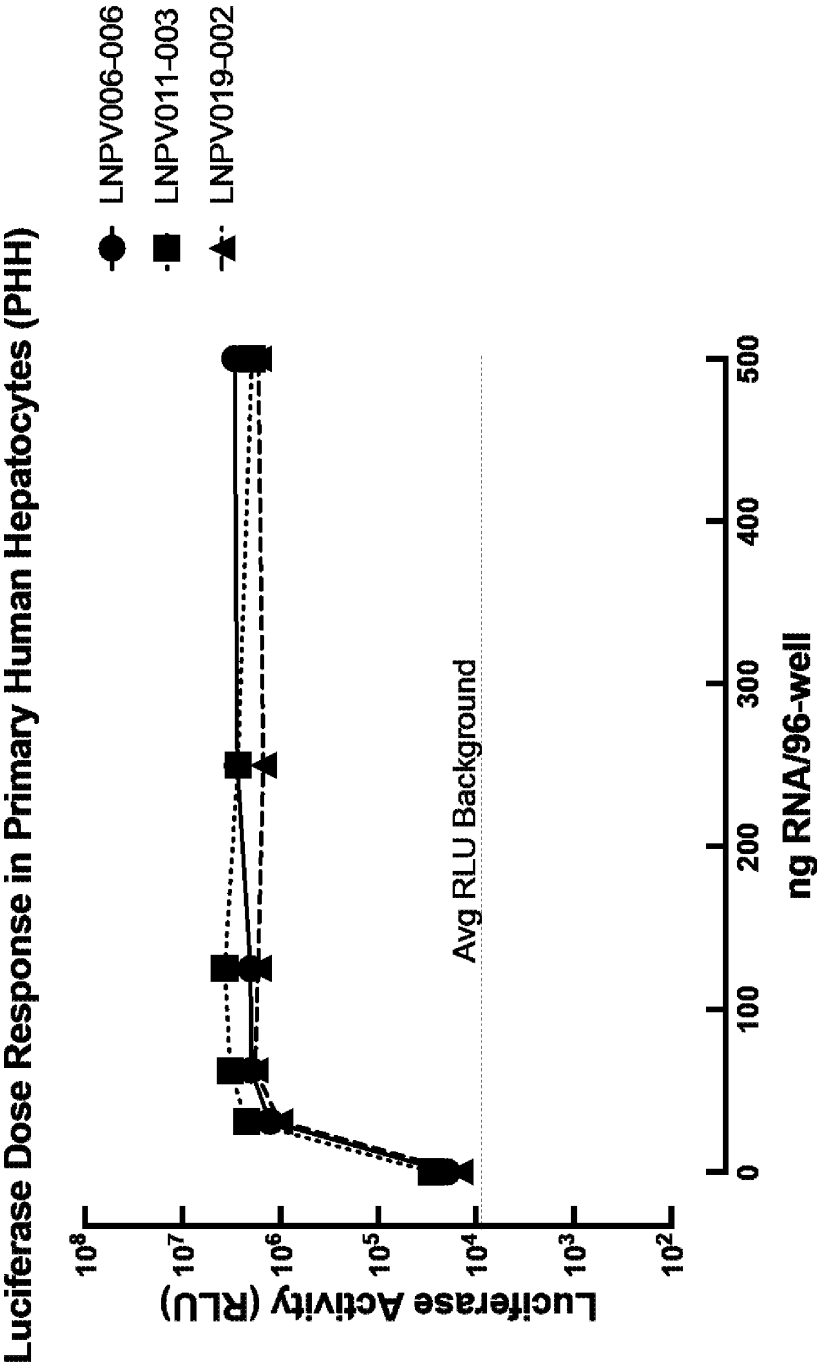


FIG. 13A

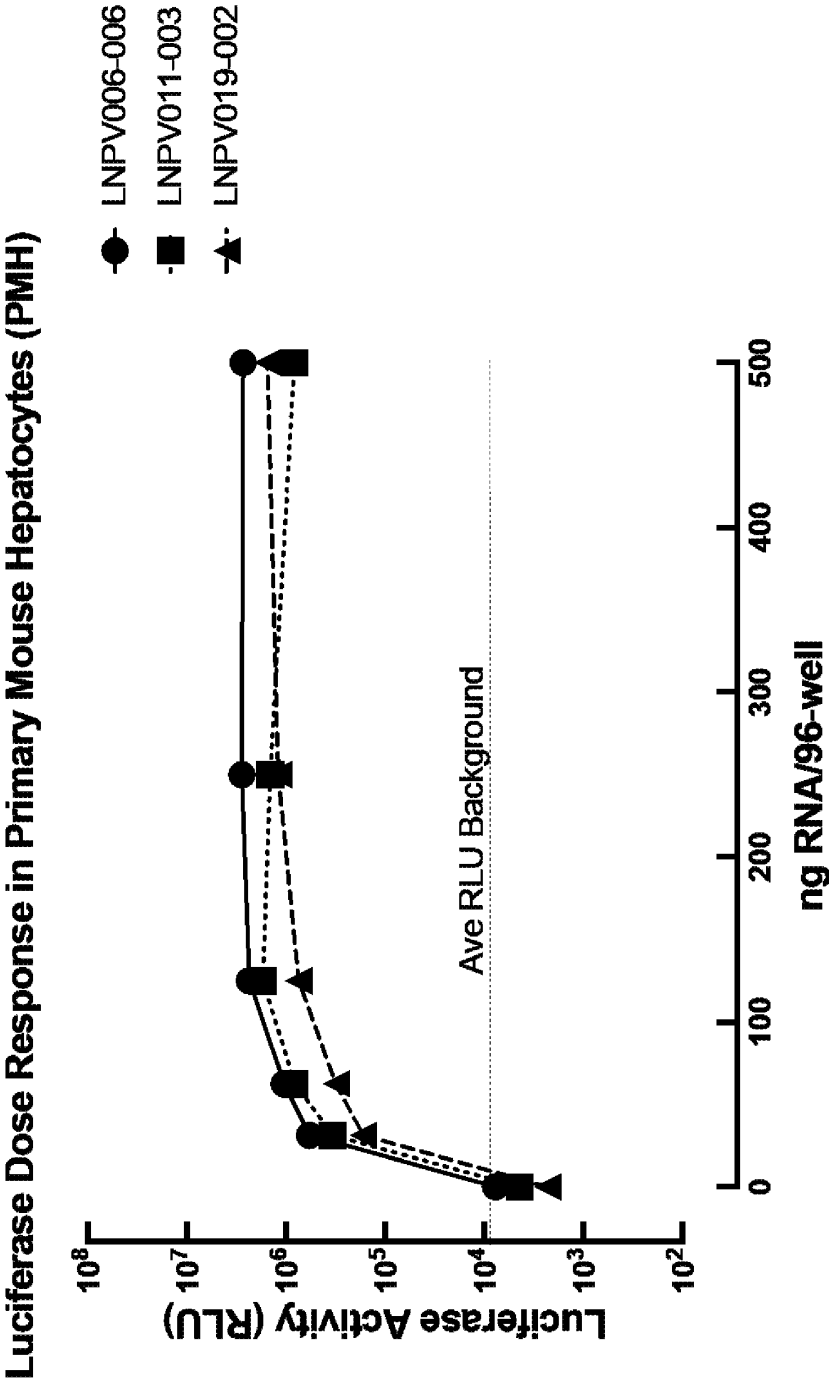


FIG. 13B

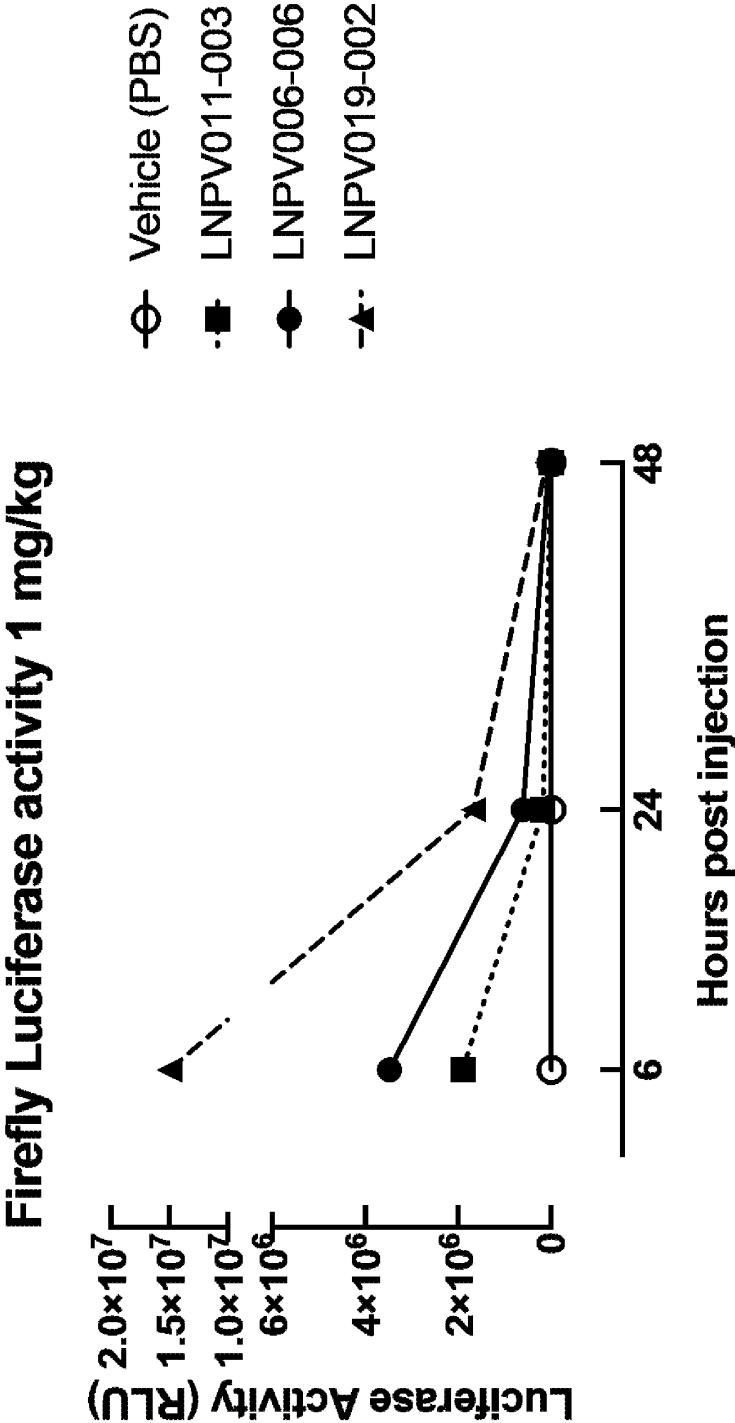


FIG. 14