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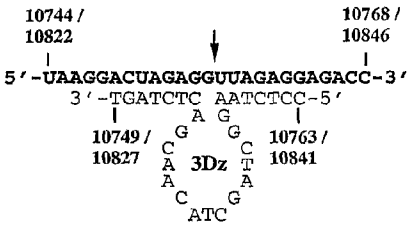
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(54) Title: DNAZYMES FOR INHIBITION OF JAPANESE ENCEPHALITIS VIRUS REPLICATION



(57) Abstract: The present invention relates to synthetic catalytic DNA molecules or DNAzymes which specifically cleave the RNA sequences of the Japanese Encephalitis Viral genome and is useful in treating Japanese Encephalitis infection. The DNAzyme comprises of a chemical modification, a catalytic domain and two hybridizing arms. The DNAzymes are 29-45 nucleotides in length. The 3' end of the DNAzyme is tethered to a poly-(G)10 tail and the molecule comprises of at least one chemical modification. The chemical modifications are in the form of sugar modification, nucleic acid base modification, and/or phosphate backbone modification. The catalytic DNA molecule inhibits JEV replication in vitro in cultured cells and in vivo in the mouse brain. The present invention also relates to the method of treatment of Japanese encephalitis comprising the steps of introducing the catalytic DNA molecule or DNAzyme into the infected cells under conditions suitable for cleavage and reduction of viral titres.

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