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(54) Title: RECOMBINANT MEASLES VIRUS EXPRESSING ZIKA VIRUS PROTEINS AND THEIR APPLICATIONS

(57) Abstract: The present invention relates to recombinant measles virus expressing Zika virus proteins and their applications, in particular in inducing preventive protection against Zika virus. The present invention is directed to recombinant measles virus (MV) expressing at least (i) the precursor of membrane (prM) protein of a Zika virus (ZIKV), and the envelope (E) protein of a ZIKV or a truncated version thereof, or (ii) the E protein of a ZIKVor a truncated version thereof, and concerns recombinant infectious particles of said MV-ZIKV able to replicate in a host after an administration, and also Virus Like Particles (VLPs) that contain these ZIKV proteins at their surface. The present invention provides means, in particular nucleic acids, vectors, cells and rescue systems to produce these recombinant infectious particles and VLPs. The present invention also relates to the use of these recombinant infectious particles and/or VLPs, in particular under the form of a composition, more particularly in a vaccine formulation, for the prevention of an infection by ZIKV or for the preventive protection against clinical outcomes of ZIKV infection.

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