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(54) Title: LENTIVIRAL VECTORS ENABLING ROUTING ANTIGENS TO MHC-II PATHWAY AND INDUCING CD4+ AND CD8+ T-CELL RESPONSES IN A HOST

(57) Abstract: The invention relates to a recombinant lentiviral vector genome comprising a polynucleotide encoding a fusion polypeptide, wherein said fusion protein comprises arranged from N-terminal to C-terminal ends: (i) a first polypeptide comprising a multimerization scaffold which comprises at least one collectin or a fragment thereof suitable to enable self-assembly of multimers of the first polypeptide, fused with at least one antigenic polypeptide; (ii) a second polypeptide comprising a CD40L ectodomain or a receptor binding fragment thereof, in particular the CD40L ectodomain of the human CD40L. The invention also relates to a lentiviral vector and pharmaceutical compositions comprising it.