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(54) Title: ANTI-ALPHA-SYNUCLEIN THERAPEUTIC VACCINES

(57) Abstract: The present invention relates to a liposomal vaccine composition comprising: a peptide antigen displayed on the surface of the liposome; a peptide comprising a T-cell epitope; and an adjuvant; wherein the peptide antigen comprises, consists essentially of or consists of the structure: X₁-X₂-X₃-E-X₄-X₅-P-V-D-P-D-N-E-X₆, wherein: E is glutamic acid, P is proline; V is Valine, D is aspartic acid, N is asparagine; X₁ is present or not and, if present, is G, wherein G is glycine; X₂ is present or not and, if present, is G, wherein G is defined as above; X₃ is L, K, or S, wherein L is leucine, K is lysine, and S is serine; X₄ is D, K or S, wherein D, K and S are as defined above; X₅ is M, wherein M is methionine or methionine sulfoxide; X₆ is A, K or S, wherein A is alanine and K, and S are as defined above; with the proviso that X₃-E-X₄-X₅-P-V-D-P-D-N-E-X₆ is not L-E-D-M-P-V-D-P-D-N-E-A, and which comprises between 1 and 5 amino acid differences compared with the amino acid sequence G-I-L-E-D-M-P-V-D-P-D-N-E-A, and wherein the peptide antigen does not comprise the dipeptide Y-E immediately following X₆, wherein Y is tyrosine and E is as defined above.

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