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(54) Title: NOVEL LIPID NANOPARTICLES FOR DELIVERY OF NUCLEIC ACIDS COMPRISING PHOSPHATIDYLSERINE

(57) Abstract: The invention relates to a vaccine composition comprising a) at least one nucleic acid encoding at least one antigen or fragment or variant thereof; and b) a carrier composition, wherein the carrier composition comprises the phospholipid phosphatidylserine. The present invention further relates to a pharmaceutical composition comprising the vaccine composition and a pharmaceutically acceptable carrier, diluent or excipient, and to the vaccine composition or pharmaceutical composition for use in the treatment or prophylaxis of (as well as a corresponding method of treatment thereof) infectious diseases; cancer or tumor diseases, disorders or conditions; specific liver diseases; allergies; or autoimmune disease, disorder or condition; in a subject. Still further, the present invention is concerned with a kit or kit of parts, comprising the vaccine composition or the pharmaceutical composition as well as a method of inducing an immune response in a subject. Finally, the present invention is concerned with a use of a vaccine composition or the pharmaceutical composition or the kit or kit of parts for (i) inducing an immune response and for (ii) inducing an antigen specific T-cell response in a subject.

WO 2023/031392 A3