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(54) Title: ZWITTERIONIC LIPID NANOPARTICLE COMPOSITIONS, AND METHODS OF USE

(57) Abstract: A lipid nanoparticle composition comprising: (i) at least one zwitterionic polymer-containing lipid in which a lipid moiety is covalently attached to a zwitterionic polymer; (ii) at least one non-cationic lipid selected from charged and uncharged lipids, but not attached to a polymer; (iii) at least one cationic or ionizable lipid; and (iv) at least one therapeutic substance, and optionally (v) cholesterol or derivative thereof. Also described herein are methods of delivering a therapeutic substance to a subject, the method comprising administering to the subject a lipid nanoparticle composition described above.

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