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(54) Title: LNP COMPOSITIONS COMPRISING MRNA THERAPEUTICS WITH EXTENDED HALF-LIFE

(57) Abstract: The disclosure features a polynucleotide encoding a polypeptide, which polynucleotide comprises: a 5'UTR described herein; a coding region comprising a payload and a stop element described herein; and a 3'UTR described herein, and LNP compositions comprising the same. The polynucleotides and/or LNP compositions of the present disclosure can: increase the level and/or activity of the payload by increasing the half-life and/or duration of expression of the polynucleotide encoding the payload or of the payload polypeptide. Also disclosed herein are methods of treating a disease or disorder in a subject using the LNP compositions of the present disclosure.