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(54) Title: RNA FOR IN VIVO TRANSFECTION WITH INCREASED EXPRESSION

(57) Abstract: This disclosure provides improved RNA molecules, including mRNA molecules that can be produced by in vitro transcription and are suitable for in vivo transfection using an appropriate delivery vehicle, such as a lipid nanoparticle (LNP) or targeted lipid nanoparticle (tLNP). The improved RNA include particular combinations of 5' untranslated region (UTR) and 3' UTR, particular 3' UTRs, or particular open reading frame sequences. Also provided herein are compositions of the LNP, or tLNP with an antibody as a targeting moiety, such as anti-CD8 antibodies that are used as targeting moiety.