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(54) Title: ARTIFICIAL TRANSCRIPTION FACTORS ENGINEERED TO OVERCOME ENDOSOMAL ENTRAPMENT

(57) Abstract: The invention relates to an artificial transcription factor comprising a polydactyl zinc finger protein targeting specifically a gene promoter, engineered to overcome endosomal entrapment after transduction into cells. Such artificial transcription factor comprises a polydactyl zinc finger protein fused to an inhibitory or activatory protein domain, a nuclear localization sequence, a protein transduction domain, and an endosome-specific protease-recognition site. These transducible artificial transcription factors are particularly useful for the treatment of diseases caused or modulated by membrane-bound receptor proteins, nuclear receptor proteins or products of haploinsufficient genes.