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(54) Title: REGULATION OF RECEPTOR EXPRESSION THROUGH DELIVERY OF ARTIFICIAL TRANSCRIPTION FACTORS

(57) Abstract: The invention relates to an artificial transcription factor comprising a polydactyl zinc finger protein targeting specifically a receptor gene promoter fused to an inhibitory or activatory protein domain, a nuclear localization sequence, and a protein transduction domain. In particular examples these receptor gene promoters regulate the expression of the endothelin receptor A, the endothelin receptor B, the Toll-like receptor 4 or the high-affinity IgE receptor. Artificial transcription factors directed to the endothelin A or B receptors are useful in the treatment of diseases modulated by endothelin, such as cardiovascular diseases, and, in particular, eye diseases, e.g. retinal vein occlusion, retinal artery occlusion, macular edema, optic neuropathy, central serous chorioretinopathy, retinitis pigmentosa, Leber's hereditary optic neuropathy, and the like. Artificial transcription factors directed to the Toll-like receptor 4 or the IgE receptor are useful for the treatment of autoimmune disorders, and the like, and allergic disorders, respectively.