THERAPEUTIC COMPOSITIONS AND METHODS INVOLVING MRNA TRANSFECTION

ABSTRACT

This disclosure describes compositions and methods involved in tumor suppression and inhibiting infection of cells by pathogens. Generally, the compositions include an mRNA cargo that can provide a therapeutic benefit after being introduced into an epithelial cell. In some cases, the mRNA can encode a polypeptide. In some cases, the polypeptide can suppress epithelial cell proliferation. In other embodiments, the polypeptide can be involved in innate immunity. In various embodiments, the polypeptide can include cathelicin antimicrobial protein (CAMP), calprotectin, S100A8, S100A9, a β-defensin, S100A7, secretory leukocyte inhibitor, lipocalin 2, or lysozyme. In some embodiments, the mRNA can include a stabilizing moiety such as, for example, a 5' cap or a 3' extension.

[Fig. 13]

THERAPEUTIC COMPOSITIONS AND METHODS INVOLVING MRNA TRANSFECTION

ABSTRACT

This disclosure describes compositions and methods involved in tumor suppression and inhibiting infection of cells by pathogens. Generally, the compositions include an mRNA cargo that can provide a therapeutic benefit after being introduced into an epithelial cell. In some cases, the mRNA can encode a polypeptide. In some cases, the polypeptide can suppress epithelial cell proliferation. In other embodiments, the polypeptide can be involved in innate immunity. In various embodiments, the polypeptide can include cathelicin antimicrobial protein (CAMP), calprotectin, S100A8, S100A9, a β-defensin, S100A7, secretory leukocyte inhibitor, lipocalin 2, or lysozyme. In some embodiments, the mRNA can include a stabilizing moiety such as, for example, a 5' cap or a 3' extension.

[Fig. 13]