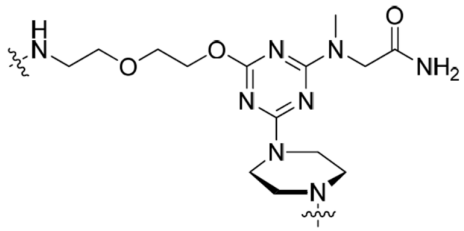
CLAIMS

1. A pharmaceutical composition comprising a cationic peptide-linked morpholino antisense oligonucleotide comprising:

   (a) a morpholino antisense oligonucleotide sequence complementary to at least 3 polyCUG repeat sequences in a 3' untranslated region (UTR) of a dystrophia myotonica protein kinase (DMPK) RNA transcript target;

   (b) a spacer moiety linking the morpholino antisense oligonucleotide and a cationic peptide, the spacer moiety comprising



   wherein the spacer moiety is linked to the morpholino antisense oligonucleotide at the 5' end of the morpholino antisense oligonucleotide; and

   (c) the cationic peptide that is 8-30 amino acid residues in length.

2. ~~The pharmaceutical composition of claim 1, wherein the spacer moiety is linked to the morpholino antisense oligonucleotide at the 5' end of the morpholino antisense oligonucleotide.~~

~~3.~~ The pharmaceutical composition of claim 1 ~~or 2~~, wherein the cationic peptide comprises one or more subsequences selected from the group consisting of RXR, RX, RB, and RBR,

wherein R is arginine, B is β-alanine, and each X is independently $–NH–(CHR^1)_n–C(O)–$,

wherein n is 4-6 and each R^1 is independently H or methyl such that at most two R^1s are methyl.

~~4~~3. The pharmaceutical composition of ~~any one of claims 1-3~~claim 1 or 2, wherein the cationic peptide comprises the amino acid sequence $Ac(RXRRBR)_2XB–$.

~~5~~4. The pharmaceutical composition of ~~any one of claims 1-3~~claim 1 or 2, wherein the cationic peptide comprises the amino acid sequence Ac(RXR)$_4$XB–.

~~6~~5. The pharmaceutical composition of any one of claims 1-~~5~~4, wherein the morpholino antisense oligonucleotide comprises the sequence 5' –(AGC)$_n$– 3', 5' –(GCA)$_n$– 3', or 5' –(CAG)$_n$– 3', wherein n is any of about 5-25.

~~7~~6. The pharmaceutical composition of claim ~~6~~5, wherein the morpholino antisense oligonucleotide further comprises 1 to 2 additional morpholino nucleotides on the 5' and/or the 3' end of the oligonucleotide.

~~8~~7. The pharmaceutical composition of any one of claims 1-~~7~~6, wherein the morpholino antisense oligonucleotide comprises the sequence: 5' –AGCAGCAGCAGCAGCAGCAGCA– 3'.

~~9~~8. The pharmaceutical composition of claim ~~8~~7, wherein the morpholino antisense oligonucleotide further comprises a 5' amine modification.

~~10~~9. The pharmaceutical composition of any one of claims 1-~~9~~8, wherein the morpholino antisense oligonucleotide is a phosphorodiamidate morpholino antisense oligonucleotide.

~~11~~10. The pharmaceutical composition of any one of claims 1-~~10~~9, wherein the cationic peptide-linked morpholino antisense oligonucleotide is capable of penetrating into cells of the tibialis anterior muscle, the quadriceps muscle, and/or the gastrocnemius muscle.

~~12~~11. The pharmaceutical composition of any one of claims 1-~~11~~10, further comprising a pharmaceutically acceptable excipient.