-continued

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<400> SEQUENCE: 35

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ggcaccgagu cggugcuuuu uu                                               82
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1-65. (canceled)

66. A pharmaceutical composition for the treatment or prevention of a joint disease or condition, comprising:

a therapeutically effective amount of one or more nucleic acids encoding a Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) gene-editing system, the system comprising:

(i) a CRISPR Associated Protein 9 (Cas9) protein; and

(ii) at least one guide RNA targeting an IL-1α gene, wherein:

the at least one guide RNA comprises a crRNA sequence that is complementary to a target sequence in exon 4 of the IL-1α gene, and

the target sequence is adjacent to a protospacer adjacent motif (PAM) sequence for the Cas9 protein.

67. The pharmaceutical composition of claim **66**, wherein the composition comprises one or more viral vectors collectively comprising the one or more nucleic acids.

68. The pharmaceutical composition of claim **67**, wherein the one of more viral vectors comprise a recombinant virus selected from a retrovirus, an adenovirus, an adeno-associated virus, a lentivirus, and a herpes simplex virus-1

69. The pharmaceutical composition of claim **67**, wherein the one of more viral vectors comprise a recombinant adeno-associated virus (AAV).

70. The pharmaceutical composition of claim **69**, wherein the recombinant AAV is of serotype 5 (AAV5).

71. The pharmaceutical composition of claim **69**, wherein the recombinant AAV is of serotype 6 (AAV6).

72. The pharmaceutical composition of claim **67**, wherein the one of more viral vectors comprise:

a first viral vector comprising a first nucleic acid, in the one or more nucleic acids, encoding the Cas9 protein; and

a second viral vector comprising a second nucleic acid, in the one or more nucleic acids, encoding the at least one guide RNA.

73. The pharmaceutical composition of claim **67**, wherein the one of more viral vectors comprise a viral vector comprising a single nucleic acid, wherein the single nucleic acid encodes the Cas9 protein and the at least one guide RNA.

74. The pharmaceutical composition of claim **66**, wherein the composition comprises one or more liposomes collectively comprising the one or more nucleic acids.

75. The pharmaceutical composition of claim **66**, wherein the one or more nucleic acids are present in a naked state.

76. The pharmaceutical composition of claim **66**, wherein the Cas9 protein is an *S. pyogenes* Cas9 polypeptide.

77. The pharmaceutical composition of claim **66**, wherein the Cas9 protein is an *S. aureus* Cas9 polypeptide.

78. The pharmaceutical composition of claim **66**, wherein the IL-1α gene is a human IL-1α gene.

79. The pharmaceutical composition of claim **66**, wherein the IL-1α gene is a canine IL-1α gene.

80. The pharmaceutical composition of claim **66**, wherein the IL-1α gene is an equine IL-1α gene.

81. The pharmaceutical composition of claim **66**, wherein the composition is formulated for parenteral administration.