Claims

1. An artificial nucleic acid molecule comprising

   a. at least one open reading frame (ORF);

   b. at least one 3'-untranslated region element (3'UTR element) comprising a nucleic acid sequence which is derived from the 3'UTR of an albumin gene or from a variant of the 3'UTR of an albumin gene, wherein the variant of the 3'UTR of an albumin gene is at least 80% identical to the naturally occurring 3' UTR the variant is derived from, and

   c. a histone stem-loop.

2. The artificial nucleic acid molecule according to claim 1, wherein the open reading frame does not code for beta-globin, in particular in case the 3'UTR element is derived from the 3'UTR of the rat albumin gene, and

   wherein the open reading frame does not code for human factor IX, in particular in case the 3'UTR element is derived from the 3'UTR of the human albumin gene.

3. The artificial nucleic acid molecule according to claim 1 or 2, wherein the at least one 3'UTR element comprises a nucleic acid sequence which is derived from the 3'UTR of a vertebrate albumin gene or from a variant thereof, preferably from the 3'UTR of a mammalian albumin gene e.g. of the mouse albumin gene or from a variant thereof, more preferably from the 3'UTR of a primate albumin gene, particular of the human albumin gene or the albumin gene from *Olive baboon*, or from a variant thereof, even more preferably from the 3'UTR of the human albumin gene according to GenBank Accession number NM_000477.5 or from a variant thereof, wherein the variant is at least 80% identical to the naturally occurring 3' UTR the variant is derived from.

4. The artificial nucleic acid molecule according to any one of claims 1-3, wherein the at least one 3'UTR element comprises or consists of a nucleic acid sequence which has an identity of at least about 80%, more preferably of at least about 90%, even more preferably of at least about 95%, even more preferably of at least about 99% to the nucleic acid sequence according to SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 32, SEQ ID NO. 33, SEQ ID No. 34, or SEQ ID No. 35, or wherein

the at least one 3'UTR element comprises or consists of a fragment of a nucleic acid sequence which has an identity of at least about 80%, more preferably of at least about 90%, even more preferably of at least about 95%, even more preferably of at least about 99% to the nucleic acid sequence according to SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 32, SEQ ID NO. 33, SEQ ID No. 34, or SEQ ID No. 35.

5. The artificial nucleic acid molecule according to claim 4, wherein the fragment exhibits a length of at least about 50 nucleotides, preferably of at least about 75 nucleotides, more preferably of at least about 100 nucleotides, even more preferably of at least about 125 nucleotides, most preferably of at least about 150 nucleotides.

6. The artificial nucleic acid molecule according to any one of claims 1-5, wherein the at least one 3'UTR element exhibits a length of at least about 50 nucleotides, preferably of at least about 75 nucleotides, more preferably of at least about 100 nucleotides, even more preferably of at least about 125 nucleotides, most preferably of at least about 150 nucleotides.

7. The artificial nucleic acid molecule according to any one of claims 1-6 further comprising

   d. a poly(A) sequence and/or a polyadenylation signal.

8. The artificial nucleic acid molecule according to claim 7, wherein the polyadenylation signal is located within the 3'UTR element.

9. The artificial nucleic acid molecule according to claim 7 or 8, wherein the polyadenylation signal comprises the consensus sequence NN(U/T)ANA, with N = A or U, preferably AA(U/T)AAA or A(U/T)(U/T)AAA.

10. The artificial nucleic acid molecule according to any one of claims 7-9, wherein the polyadenylation signal, preferably the consensus sequence NNUANA, is located less than about 50 nucleotides upstream of the 3'-end of the 3'UTR.

11. The artificial nucleic acid molecule according to any one of claims 7-10, wherein the poly(A) sequence has a length of about 20 to about 300 adenine nucleotides, preferably of about 40 to about 200 adenine nucleotides, more preferably of about 50 to about 100 adenine nucleotides, even more preferably of about 60 to about 70 adenine nucleotides.

12. The artificial nucleic acid molecule according to any one of claims 1-11, wherein the open reading frame does not code for albumin, preferably not for human albumin.

13. The artificial nucleic acid molecule according to any one of claims 1-12, further comprising a 5'-cap structure, a poly(C) sequence, and/or an IRES-motif.

14. The artificial nucleic acid molecule according to any one of claims 1-13, wherein the nucleic acid comprises an additional 5'-element, preferably a 5'UTR, a promoter, or a 5'UTR and a promoter containing-sequence.

15. The artificial nucleic acid molecule according to any one of claims 1-14, wherein the artificial nucleic acid molecule, preferably the open reading frame, is at least partially G/C modified, preferably wherein the G/C content of the open reading frame is increased compared to the wild type open reading frame.

16. The artificial nucleic acid molecule according to any one of claims 1-15, wherein the open reading frame comprises a codon-optimized region, preferably, wherein the open reading frame is codon-optimized.

17. The artificial nucleic acid molecule according to any one of claims 1-16, which is an RNA, preferably an mRNA molecule.

18. A vector comprising

    a. an open reading frame and/or a cloning site;

    b. at least one 3'-untranslated region element (3'UTR element) comprising a nucleic acid sequence which is derived from the 3'UTR of an albumin gene or from a variant of the 3'UTR of an albumin gene; wherein the variant of the 3'UTR of an albumin gene is at least 80% identical to the naturally occurring 3' UTR the variant is derived from; and

    c. a histone stem-loop,

19. A vector according to claim 18, wherein the open reading frame does not code for beta-globin, in particular in case the 3'UTR element is derived from the 3'UTR of the rat albumin gene, and

wherein the open reading frame does not code for human factor IX, in particular in case the 3'UTR element is derived from the 3'UTR of the human albumin gene

20. The vector according to claim 18 or 19, which is a DNA vector.

21. The vector according to any one of claims 18-20, which is a plasmid vector or a viral vector, preferably a plasmid vector.

22. The vector according to any one of claims 18-21, which comprises an artificial nucleic acid molecule according to any one of claims 1-17.

23. The vector according to any one of claims 18-22, which is a circular molecule.

24. The vector according to claim 23, wherein the poly(A) sequence or the 3'UTR element of the coding strand is followed in 5'→3' direction by a restriction site for linearization of the circular vector molecule.

25. A cell comprising the artificial nucleic acid molecule according to any one of claims 1-17 or the vector according to any one of claims 18-24, preferably a mammalian cell.

26. A pharmaceutical composition comprising the artificial nucleic acid molecule according to any one of claims 1-17, the vector according to any one of claims 18-24, or the cell according to claim 25.

27. The pharmaceutical composition according to claim 26, further comprising one or more pharmaceutically acceptable diluents and/or excipients and/or one or more adjuvants.

28. The artificial nucleic acid molecule according to any one of claims 1-17, the vector according to any one of claims 18-24, the cell according to claims 25, or the pharmaceutical composition according to claim 26 or 27 for use as a medicament.

29. The artificial nucleic acid molecule according to any one of claims 1-17, the vector according to any one of claims 18-24, the cell according to claim 25, or the pharmaceutical composition according to claim 26 or 27 for use as a vaccine or for use in gene therapy.