CLAIMS

1. A nucleic acid for the controlled expression of a nucleic acid encoding a Cas nuclease in at least one target cell of an individual, comprising:

- a regulatory polynucleotide comprising a minimal promoter and from one to twenty AARE (amino acid response element) nucleic acids, said regulatory polynucleotide being activated in an individual upon consumption of a diet deficient in at least one essential amino acid; and

- a nucleic acid encoding a Cas nuclease, which is placed under the control of the said regulatory polynucleotide.

2. The nucleic acid according to claim 1, wherein the Cas nuclease is Cas9 nuclease.

3. The nucleic acid according to any one of claims 1 or 2, wherein the amino acid response element (AARE) nucleic acid is selected in a group comprising a nucleic acid of sequence SEQ ID No: 1, SEQ ID No: 2, SEQ ID No: 3, SEQ ID No: 4 and SEQ ID No: 5.

4. The nucleic acid according to any one of claims 1 to 3, wherein the regulatory polynucleotide comprises from two to ten AARE nucleic acids.

5. The nucleic acid according to any one of claims 1 to 4, wherein the regulatory polynucleotide comprises from two to six AARE nucleic acids.

6. A nucleic acid vector for the controlled expression of a nucleic acid encoding a Cas nuclease, comprising a nucleic acid according to any one of claims 1 to 5.

7. A delivery particle comprising a nucleic acid according any one of claims 1 to 5 or a nucleic acid vector according to claim 6.

8. The delivery particle according to claim 6, which comprises at its surface one or more ligands suitable for binding to a target receptor exposed at the membrane of a targeted cell.

9. A pharmaceutical composition comprising (i) a nucleic acid according any one of claims 1 to 4 or a nucleic acid vector according to claim 5 or a delivery particle according to claim 7 or 8, and (ii) a pharmaceutically acceptable vehicle.

10. A host cell comprising the nucleic acid according any one of claims 1 to 5 or a nucleic acid vector according to claim 6.

11. A pharmaceutical composition according to claim 9 for use as a medicament.

12. A pharmaceutical composition according to claim 9 for use as an active agent for editing the genome into at least one target cell.

13. The pharmaceutical composition for use according to claim 12, wherein the target cell has at least a genetic mutation.

14. A method for editing the genome into at least one target cell comprising at least the step of administering to an individual in need thereof the pharmaceutical composition according to claim 9.

15. A pharmaceutical composition according to claim 9 for use as an active agent for preventing and/or treating a disease.

16. A method for preventing and/or treating a disease comprising at least the step of administering to an individual in need thereof the pharmaceutical composition according to claim 9.

17. A kit for treating and/or preventing a disease comprising:

- a pharmaceutical composition according to claim 9, and
- a pharmaceutically active compound.