

What Is Claimed Is:

- Claim 1. A recombinantly-modified adeno-associated virus (rAAV) that comprises a Cis-Element in one or more of its **P1**, **P2**, **P3** or **P4 Domains**, wherein:
- (1) said **P1 Domain** is 5' to a 5' ITR of said rAAV;
 - (2) said **P2 Domain** is 3' to said 5' ITR of said rAAV and 5' to a transgene cassette of said rAAV;
 - (3) said **P3 Domain** is 3' to said transgene cassette of said rAAV and 5' to a 3' ITR of said rAAV; and
 - (4) said **P4 Domain** is 3' to said 3' ITR of said rAAV; and
- wherein the presence of said Cis-Element causes rAAV-producing cells to produce said rAAV at a higher production titer than would be attained with such rAAV if lacking said Cis-Element.
- Claim 2. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P1 Domain**.
- Claim 3. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P2 Domain**.
- Claim 4. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P3 Domain**.
- Claim 5. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P4 Domain**.
- Claim 6. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P1 Domain** and in one or more of its **P2**, **P3** or **P4 Domain**.

- Claim 7. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P2 Domain** and in one or more of its **P3** or **P4 Domain**.
- Claim 8. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV has been modified to comprise an added Cis-Element in its **P3 Domain** and its **P4 Domain**.
- Claim 9. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said added Cis-Element forms a G-Quadruplex Structure in said employed rAAV.
- Claim 10. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein an added Cis-Element is selected from the group consisting of:
- (1) a Potential G-Quadruplex Sequence of a wild type AAV genome or a Potential G-Quadruplex Sequence of a wild type AAV genome in a reversed orientation;
 - (2) an Actual G-Quadruplex Sequence of a wild type AAV genome or an Actual G-Quadruplex Sequence of a wild type AAV genome in a reversed orientation;
 - (3) a DNA sequence from wild-type AAV or a DNA sequence from wild-type AAV in a reversed orientation; and
 - (4) a DNA sequence from another viral genome or a DNA sequence from another viral genome in a reversed orientation.
- Claim 11. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said transgene cassette encodes a protein, or comprises a transcribed nucleic acid, that is therapeutic for a genetic or heritable disease or condition.
- Claim 12. The recombinantly-modified adeno-associated virus (rAAV) of claim 1, wherein said employed rAAV belongs to the rAAV1, rAAV2, rAAV5, rAAV6, rAAV7, rAAV8, rAAV9 or rAAV10 serotype, or to a hybrid of said serotypes.

- Claim 13. A pharmaceutical composition that comprises:
- (A) the recombinantly-modified adeno-associated virus (rAAV) of claim 1; and
 - (B) a pharmaceutically acceptable carrier.
- Claim 14. The pharmaceutical composition of claim 13, wherein said employed rAAV belongs to the rAAV1, rAAV2, rAAV5, rAAV6, rAAV7, rAAV8, rAAV9 or rAAV10 serotype, or to a hybrid of said serotypes.
- Claim 15. A method for increasing the production titer of recombinantly-modified adeno-associated virus (rAAV), wherein said method comprises:
- (A) employing, as said rAAV for producing said production titer, an rAAV that has been modified to comprise an added Cis-Element in one or more of its **P1**, **P2**, **P3** or **P4 Domains**, wherein:
 - (1) said **P1 Domain** is 5' to a 5' ITR of said rAAV;
 - (2) said **P2 Domain** is 3' to said 5' ITR of said rAAV and 5' to a transgene cassette of said rAAV;
 - (3) said **P3 Domain** is 3' to said transgene cassette of said rAAV and 5' to a 3' ITR of said rAAV; and
 - (4) said **P4 Domain** is 3' to said 3' ITR of said rAAV; and
 - (B) culturing cells that have been transfected with said employed rAAV, wherein said cells additionally contain an AAV helper function-providing polynucleotide and a non-AAV helper function-providing polynucleotide, and wherein said culturing is conducted in a culture medium under conditions sufficient to permit the production of rAAV;
- wherein the presence of said Cis-Element in said employed rAAV causes said cells to produce said rAAV at an increased production titer relative to that which would be attained if said employed rAAV had lacked said Cis-Element.
- Claim 16. The method of claim 15, wherein said cells are human embryonic kidney cells or baby hamster kidney cells.

- Claim 17. The method of claim 16, wherein said cells are HEK293 human embryonic kidney cells.
- Claim 18. The method of claim 16, wherein said cells are BHK21 baby hamster kidney cells.
- Claim 19. The method of claim 15, wherein said cells are sf9 insect cells.