CLAIMS

What is claimed is:

1. A pharmaceutical composition comprising a recombinant adeno associated virus (rAAV) virion, for use in the treatment of an ocular disease in a human or non-human primate in need thereof, wherein the composition further comprises a pharmaceutically acceptable excipient, and wherein the recombinant adeno-associated virus (rAAV) virion comprises:

a) an AAV2 capsid protein variant, wherein the AAV2 capsid protein variant comprises an insertion of a peptide in the capsid protein GH loop relative to a corresponding parental AAV2 capsid protein, wherein the insertion comprises an amino acid sequence LALGETTRPA (SEQ ID NO:45); and

b) a heterologous nucleic acid comprising a nucleotide sequence encoding an anti-angiogenic polypeptide;

wherein said composition is to be administered by intravitreal injection.

2. Use of a recombinant adeno associated virus (rAAV) virion, or pharmaceutical composition comprising said virion in the manufacture of a medicament for treating an ocular disease in a human or non-human primate in need thereof, wherein the composition further comprises a pharmaceutically acceptable excipient, and wherein the recombinant adeno-associated virus (rAAV) virion comprises:

a) an AAV2 capsid protein variant, wherein the AAV2 capsid protein variant comprises an insertion of a peptide in the capsid protein GH loop relative to a corresponding parental AAV2 capsid protein, wherein the insertion comprises an amino acid sequence LALGETTRPA (SEQ ID NO:45); and

b) a heterologous nucleic acid comprising a nucleotide sequence encoding an anti-angiogenic polypeptide;

wherein said medicament is to be administered by intravitreal injection.

3. The pharmaceutical composition according to claim 1 or the use of claim 2, wherein the insertion site is within amino acids 570-611 of the AAV2 capsid protein set forth in SEQ ID NO:1.

4. The pharmaceutical composition according to claim 1 or the use of claim 2, wherein the insertion site is between amino acids 587-588 of the AAV2 capsid protein set forth in SEQ ID NO:1.

5. The pharmaceutical composition or use according to claim 4, wherein the insertion consists of the amino acid sequence LALGETTRPA (SEQ ID NO:45) such that the AAV2 capsid protein variant comprises the sequence NLALGETTRPAR.

6. The pharmaceutical composition or use of any one of claims 1-5, wherein from 10^6 to 10^{15} rAAV2 virions are to be administered.

7. The pharmaceutical composition or use of any one of claims 1-5, wherein from 10^8 to 10^{12} rAAV2 virions are to be administered.

8. The pharmaceutical composition or use of any one of claims 1-7, wherein the anti-angiogenic polypeptide is a soluble vascular endothelial growth factor (VEGF) receptor.

9. The pharmaceutical composition or use of any one of claims 1-7, wherein the anti-angiogenic polypeptide is a VEGF-binding antibody.

10. The pharmaceutical composition or use of any one of claims 1-7, wherein the anti-angiogenic polypeptide is an Fc fusion polypeptide comprising a soluble Flt polypeptide.

11. The pharmaceutical composition or use according to any one of claims 1-10, wherein the ocular disease is exudative age-related macular degeneration.

12. The pharmaceutical composition or use according to any one of claims 1-10, wherein the ocular disease is diabetic retinopathy.

13. The pharmaceutical composition or use according to any one of claims 1-10, wherein the ocular disease is diabetic macular edema.