CLAIMS:

1. A production host cell for generating a recombinant adeno-associated virus (rAAV) having an AAVhu68 capsid comprising:

(a) a nucleic acid sequence of SEQ ID NO: 1 or a sequence at least 99% identical thereto encoding the AAVhu68 vp1 capsid protein operably linked to expression control sequences which direct expression of the AAVhu68 vp1 capsid protein in the host cell;

(b) a nucleic acid molecule for packaging into the AAVhu68 capsid, said nucleic acid molecule comprising at least one AAV inverted terminal repeat (ITR) and a non-AAV nucleic acid sequence encoding a gene product operably linked to sequences which direct expression of the product in a host cell; and

(c) sufficient AAV rep functions and helper functions to permit packaging of the nucleic acid molecule into the AAVhu68 capsid.

2. The production host cell according to claim 1, wherein the host cell further comprises a nucleic acid sequence of about nucleotide 607 to about nucleotide 2211 of SEQ ID NO: 1 or a sequence at least 99% identical thereto encoding the AAVhu68 vp3 of about amino acid 203 to about amino acid 736 of SEQ ID NO: 2.

3. The production host cell according to claim 1, wherein the host cell is a human cell line or an insect cell line.

4. The production host cell according to claim 1, wherein the host cells is a HEK293 cell, HuH-7 cell, BHK cell, or Vero cell.

5. The production host cell according to claim 1, wherein the helper functions are provided by adenovirus, baculovirus, or herpes simplex virus proteins.

6. The production host cell according to claim 1, wherein the AAV rep is from a different AAV.

7. The production host cell according to claim 6, wherein the AAV rep is from AAV2.

8. The production host cell according to claim 1, wherein the AAV rep coding sequence and cap genes are on the same nucleic acid molecule, wherein there is optionally a spacer between the rep sequence and cap gene.

9. The production host cell according to claim 8, wherein the spacer is SEQ ID NO: 9.

10. The production host cell according to claim 1, wherein the AAV rep is AAVhu68rep characterized by the amino acid sequence of SEQ ID NO: 6, or a functional fragment thereof.

11. The production host cell according to claim 10, wherein the AAV rep is encoded by the nucleic acid sequence of SEQ ID NO: 5.

12. A suspension comprising production host cells according to claim 1.

13. The suspension according to claim 12, wherein the helper functions are herpes simplex virus helper functions.

14. The suspension according to claim 12, wherein the helper functions are baculovirus helper functions.

15. A cell culture comprising the production host cell according to claim 1.

16. The cell culture according to claim 15, wherein helper functions are adenovirus helper functions.

17. A substrate comprising an adherent cell line comprising the production host cell according to claim 1.

18. The suspension according to claim 12, wherein the host cells can produce an amount of rAAVhu68 particles that is at least 20% higher than the amount produced by AAVhu68 of SEQ ID NO: 3.