What is claimed is:

1. Use of a recombinant adeno-associated virus serotype 9 (rAAV9) vector carrying an expression cassette encoding a human iduronate-2-sulfatase (IDS) in the manufacture of a medicament for treatment of mucopolysaccharidosis II (MPS II) in a human subject, wherein the rAAV9 vector is for administration to the human subject via an intracisternal (IC) injection or intracerebroventricular (ICV) injection, and wherein a glycosylated recombinant human IDS is produced by neuronal cells or glial cells of the human subject after administration of the rAAV9 vector to the human subject, wherein the rAAV9 vector comprises a chicken β-actin promoter and CMV enhancer (CB7) promoter.

2. Use of a glycosylated recombinant human iduronate-2-sulfatase (IDS) produced by neuronal cells or glial cells of a human subject transduced with a recombinant adeno-associated virus serotype 9 (rAAV9) vector carrying an expression cassette encoding a recombinant human iduronate-2-sulfatase (IDS), in the manufacture of a medicament for treatment of mucopolysaccharidosis II (MPS II) in the human subject, wherein a composition comprising the rAAV9 vector and a physiologically compatible carrier is for administration to the human subject via an intracisternal (IC) injection or intracerebroventricular (ICV) injection, wherein the rAAV9 vector comprises a chicken β-actin promoter and CMV enhancer (CB7) promoter.

3. The use of claim 1 or 2, wherein the glycosylated recombinant human IDS is about 90 kDa as measured by polyacrylamide gel electrophoresis.

4. The use of any one of claims 1 to 3, wherein the glycosylated recombinant human IDS is to be delivered to the cerebrospinal fluid (CSF) of the brain of the human subject.

5. The use of any one of claims 1, 3 and 4, wherein the rAAV9 vector is for a single administration to the human subject, thereby treating the human subject.

6. The use of any one of claims 2 to 4, wherein the composition is for a single administration to the human subject, thereby treating the human subject.

7. The use of claim 5 or 6, wherein the single administration of the rAAV9 vector is from 1.1×10^{10} genome copies (GC)/g brain mass to 6.5×10^{10} GC/g brain mass.

8. The use of claim 5 or 6, wherein the single administration of the rAAV9 vector is from 7.8×10^{12} GC to 8.5×10^{13} GC.

9. The use of claim 5 or 6, wherein the single administration of the rAAV9 vector is 1.3×10^{10} GC/g brain mass.

10. The use of claim 5 or 6, wherein the single administration of the rAAV9 vector is 6.5×10^{10} GC/g brain mass.

11. The use of any one of claims 1 to 10, wherein the human subject is 10 years old or younger.

12. The use of any one of claims 1 to 10, wherein the human subject is between 4 months old and less than 5 years old.

13. The use of any one of claims 1 to 10, wherein the human subject is 18 months old or at most 18 months old.

14. The use of any one of claims 1 to 10, wherein the human subject is 3 years old or at least 3 years old.

15. The use of any one of claims 1 to 10, wherein the human subject is from 3 years old to 8 years old.

16. The use of any one of claims 1 to 10, wherein the human subject is a pediatric human subject.

17. The use of any one of claims 1, 3 to 5, and 7 to 16, wherein the human subject has severe MPS II prior to a first administration of the rAAV9 vector to the human subject.

18. The use of any one of claims 2 to 4, and 6 to 16, wherein the human subject has severe MPS II prior to a first administration of the composition to the human subject.

19. The use of any one of claims 1, 3 to 5, and 7 to 17, wherein a depot is formed in the central nervous system of the human subject after the administration of the rAAV9 vector to the human subject, and wherein the depot secretes the glycosylated recombinant human IDS.

20. The use of any one of claims 2 to 4, 6 to 16, and 18, wherein a depot is formed in the central nervous system of the human subject after the administration of the composition to the human subject, and wherein the depot secretes the glycosylated recombinant human IDS.