What is claimed is:

1. Use of a recombinant expression vector encoding a recombinant human α-L-iduronidase (rIDUA) for production by human neuronal cells or glial cells transduced with the recombinant expression vector in the preparation of a pharmaceutical composition for treating a human subject diagnosed with mucopolysaccharidosis I (MPS I), wherein the recombinant expression vector is to be administered to the human subject at a dose that is determined based on the human subject's brain mass, wherein the dose is Dose 1 or Dose 2 according to the table below:

Brain Mass (in g) of the Human Subject		**Dose Levels**	
Min	Max	**Dose 1** **Total genome copies (GC)** (about 1.0×10^{10} GC/g brain mass)	**Dose 2** **Total GC** (about 5.0×10^{10} GC/g brain mass)
-	700	6.5×10^{12}	3.3×10^{13}
701	800	7.5×10^{12}	3.8×10^{13}
801	901	8.5×10^{12}	4.3×10^{13}
901	1050	9.8×10^{12}	4.9×10^{13}
1051	1200	1.1×10^{13}	5.0×10^{13}
1201	-	1.3×10^{13}	6.5×10^{13}

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2. Use of a recombinant expression vector encoding a recombinant human α-L-iduronidase (rIDUA) in the manufacture of a medicament for treating a human subject diagnosed with mucopolysaccharidosis I (MPS I), wherein the medicament is to be administered at a dose that is determined based on the human subject's brain mass, wherein the dose is Dose 1 or Dose 2 according to the table below:

Brain Mass (in g) of the Human Subject		**Dose Levels**	
Min	Max	**Dose 1** **Total genome copies (GC)** (about 1.0×10^{10} GC/g brain mass)	**Dose 2** **Total GC** (about 5.0×10^{10} GC/g brain mass)
-	700	6.5×10^{12}	3.3×10^{13}
701	800	7.5×10^{12}	3.8×10^{13}
801	901	8.5×10^{12}	4.3×10^{13}
901	1050	9.8×10^{12}	4.9×10^{13}
1051	1200	1.1×10^{13}	5.0×10^{13}

Brain Mass (in g) of the Human Subject		**Dose Levels**	
Min	Max	**Dose 1** **Total genome copies (GC)** (about 1.0×10^{10} GC/g brain mass)	**Dose 2** **Total GC** (about 5.0×10^{10} GC/g brain mass)
1201	-	1.3×10^{13}	6.5×10^{13}

wherein the rIDUA is produced by human neuronal cells or glial cells after the medicament is to be administered to the human subject.

3. The use of claim 1 or 2, wherein the rIDUA produced by the human neuronal or glial cells is to be delivered to the cerebrospinal fluid of the brain of the human subject.

4. The use of any one of claims 1-3, wherein the brain mass is determined by brain MRI.

5. The use of any one of claims 1-4, wherein the human subject's brain mass is converted from the human subject's brain volume by multiplying the human subject's brain volume in cm^3 by a factor of 1.046 g/cm^3, wherein the human subject's brain volume is obtained from the human subject's brain MRI.

6. The use of any one of claims 1-5, wherein the recombinant expression vector is to be administered via intracisternal (IC) administration or intracerebroventricular (ICV) administration.

7. The use of any one of claims 1-6, wherein the recombinant expression vector is to be administered at a volume that does not exceed 10% of the total cerebrospinal fluid volume of the human subject.

8. The use of any one of claims 1-7, wherein an immunosuppressive therapy is to be administered to the human subject starting before or concurrently with a first administration of the recombinant expression vector and continued thereafter.

9. The use of claim 8, wherein the immunosuppressive therapy comprises (a) tacrolimus and mycophenolic acid, (b) rapamycin and mycophenolic acid, or (c) tacrolimus, rapamycin, and a corticosteroid.

10. The use of claim 9, wherein the corticosteroid comprises prednisolone, methylprednisolone, or both.

11. The use of any one of claims 8-10, wherein the immunosuppressive therapy is withdrawn 180 days after the start of the immunosuppressive therapy.

12. The use of any one of claims 1-11, wherein the rIDUA comprises the amino acid sequence of SEQ ID NO: 1.

13. The use of any one of claims 1-12, wherein the recombinant expression vector is to be administered at Dose 1.

14. The use of any one of claims 1-12, wherein the recombinant expression vector is to be administered at Dose 2.

15. The use of any one of claims 1-14, wherein the recombinant expression vector is a recombinant adeno-associated virus (AAV).

16. The use of claim 15, wherein the recombinant AAV is a recombinant AAV9 or a recombinant AAVrh10.

17. The use of claim 15 or 16, wherein the recombinant AAV comprises a CB7 promoter.

18. The use of any one of claims 1-17, wherein the recombinant expression vector is to be administered as a single administration.

19. The use of any one of claims 1-18, wherein the human subject is 4 months of age or older.

20. The use of any one of claims 1-19, wherein the recombinant expression vector comprises the nucleotide sequence of SEQ ID NO:27.