## CLAIMS

1. A glycosylated recombinant human α-L-iduronidase (IDUA) produced by human neuronal cells or human glial cells.

2. The glycosylated recombinant human IDUA of claim 1, which is expressed from a cDNA encoding human IDUA.

3. The glycosylated recombinant human IDUA of claim 1 or 2, wherein the human neuronal cells or human glial cells carry at least one mutation in the endogenous gene encoding human IDUA.

4. The glycosylated recombinant human IDUA of any one of claims 1-3, which is α2,6-sialylated.

5. The glycosylated recombinant human IDUA of any one of claims 1-4, which does not contain detectable NeuGc.

6. The glycosylated recombinant human IDUA of any one of claims 1-5, which does not contain detectable α-Gal antigen.

7. The glycosylated recombinant human IDUA of any one of claims 1-6, which is tyrosine-sulfated.

8. A glycosylated recombinant human IDUA, which: (a) is α2,6-sialylated; (b) does not contain detectable NeuGc; (c) does not contain detectable α-Gal antigen; and/or (d) is tyrosine-sulfated.

9. The glycosylated recombinant human IDUA of any one of claims 1-8, which comprises the amino acid sequence of SEQ ID NO. 1.

10. The glycosylated recombinant human IDUA of any one of claims 1-9, which is expressed from an AAV9 or AAVrh10-based viral vector.

11. Use of the glycosylated recombinant human IDUA of any one of claims 1-10 in the manufacture of a medicament for the treatment of a human subject diagnosed with mucopolysaccharidosis I (MPS I), wherein the medicament is to be delivered to the cerebrospinal fluid of the brain of the human subject.

12. The use of claim 11, wherein the medicament is to be delivered by administration of a recombinant nucleotide expression vector encoding human IDUA.

13. The use of claim 12, wherein the human subject is younger than 3 years of age and the recombinant nucleotide expression vector is administered at a dose of $2 \times 10^9$ GC/g brain mass, $1 \times 10^{10}$ GC/g brain mass, or $5 \times 10^{10}$ GC/g brain mass.

14. The use of claim 12, wherein the human subject is younger than 3 years of age and the recombinant nucleotide expression vector is administered at a dose ranging from $2 \times 10^9$ GC/g brain mass to $5 \times 10^{10}$ GC/g brain mass.

15. The use of any one of claims 12-14, wherein the recombinant nucleotide expression vector is to be administered via lumbar puncture.

16. The glycosylated recombinant human IDUA of any one of claims 1-10, wherein the glycosylated recombinant human IDUA is suitable for delivery to the central nervous system (CNS) of a subject.

17. The glycosylated recombinant human IDUA of claim 16, wherein the subject is human.