What is claimed is:

1. A glycosylated recombinant human iduronate-2-sulfatase (IDS) precursor produced by human neuronal or human glial cells and secreted at a detectable level.

2. A glycosylated recombinant human IDS precursor produced by human neuronal or human glial cells that carry at least one mutation in the endogenous gene encoding human IDS precursor.

3. A glycosylated recombinant human IDS precursor produced by human neuronal or human glial cells transduced with an rAAV.

4. A glycosylated recombinant human IDS precursor produced by human neuronal or human glial cells, wherein the glycosylated recombinant human IDS precursor is expressed under the control of a CB7 promoter.

5. The glycosylated recombinant human IDS precursor of any one of claims 1-4, which is expressed from a cDNA encoding human IDS precursor.

6. The glycosylated recombinant human IDS precursor of any one of claims 1-5, which is about 90 kDa as measured by polyacrylamide gel electrophoresis.

7. The glycosylated recombinant human IDS precursor of any one of claims 1-6, which contains a formylglycine.

8. The glycosylated recombinant human IDS precursor of any one of claims 1-7, which: (a) is α2,6-sialylated; (b) does not contain detectable NeuGc; (c) does not contain detectable α-Gal antigen; (d) contains tyrosine-sulfation; and/or (e) is mannose-6-phosphorylated.

9. A glycosylated recombinant human IDS precursor, which: (a) is about 90 kDa as measured by polyacrylamide gel electrophoresis; (b) contains a formylglycine; (c) is α2,6-sialylated; (d) does not contain detectable NeuGc; (e) does not contain detectable α-Gal antigen; (f) contains tyrosine-sulfation; and/or (g) is mannose-6-phosphorylated.

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

11. The glycosylated recombinant human IDS precursor of any one of claims 1-10, which is expressed from an AAV9 or AAVrh10 vector.

12. Use of the glycosylated recombinant human IDS precursor of any one of claims 1-11 in manufacture of a medicament for the treatment of a human subject diagnosed with mucopolysaccharidosis type II (MPS II), wherein the medicament is suitable for delivery to the cerebrospinal fluid (CSF) of the brain of said human subject.