CLAIMS

1. Use of a therapeutically effective amount of a chorionic gonadotropin carboxy terminal peptide (CTP)-modified polypeptide comprising a growth hormone, one chorionic gonadotrophin carboxy terminal peptide (CTP) attached to the amino terminus of said growth hormone, and two chorionic gonadotrophin CTPs attached to the carboxy terminus of said growth hormone and optionally, a signal peptide attached to the amino terminus of said amino terminal CTP, for the preparation of a therapeutically effective amount of a medicament for treating growth hormone deficiency in a human adult subject as measured by maintaining insulin-like growth factor (IGF-1) levels within a normal therapeutic range, wherein said therapeutically effective amount comprises a dose of 1-5 mg/week to be administered once a week.

2. The use of claim 1, wherein at least one CTP is glycosylated.

3. The use as claimed in any one of claims 1-2, wherein at least one CTP is attached to said growth hormone via a linker.

4. The use as claimed in claim 3, wherein said linker is a peptide bond.

5. The use as claimed in any one of claims 1-4, wherein the sequence of at least one CTP is encoded by an amino acid sequence selected from the group consisting of: SEQ ID NO: 1 and SEQ ID NO: 2.

6. The use as claimed in any one of claims 1-5, wherein the growth hormone is human growth hormone.

7. The use as claimed in any one of claims 1-6, wherein the amino acid sequence of the growth hormone comprises at least 80% homology to SEQ ID NO: 5.

8. The use as claimed in any one of claims 1-7, wherein said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.

9. The use as claimed in any one of claims 1-7, wherein when the amino acid sequence of said CTP-modified polypeptide comprises the sequence is set forth in amino acids 27-301 of SEQ ID NO: 11.

10. The use as claimed in any one of claims 1-8, wherein when the amino acid sequence of said

CTP-modified polypeptide comprised the sequence set forth in SEQ ID NO: 11.

11. The use as claimed in any one of claims 1-10, wherein said polypeptide is encoded by SEQ ID NO: 16.

12. The use as claimed in any one of claims 1-11, wherein said medicament is to be administered to a patient and wherein said therapeutically effective amount comprises a once weekly dose of 1.2 mg.

13. The use as claimed in any one of claims 1-11, wherein said medicament is to be administered to a patient and wherein said therapeutically effective amount comprises a once weekly dose of 1.8 mg.

14. The use as claimed in any one of claims 1-11, wherein said medicament is to be administered to a patient and wherein said therapeutically effective amount comprises a once weekly dose of 2 mg.

15. The use as claimed in any one of claims 1-11, wherein said medicament is to be administered to a patient and wherein said therapeutically effective amount comprises a once weekly dose of 4 mg.

16. The use as claimed in any one of claims 1-15, wherein said subject is male.

17. The use as claimed in any one of claims 1-16, wherein said medicament is for subcutaneously administration to said subject.