CLAIMS

~~What is claimed is:~~

1. Use of a ~~A method of inducing weight loss or decreasing body fat in a human subject, comprising administering to said subject a~~ therapeutically effective amount of a 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, for the preparation of a medicament for inducing weight loss or decreasing body fat in a human subject~~thereby inducing weight loss or decreasing body fat in said subject~~.

~~2.The method of claim 1, 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.~~

~~3.The method of claim 1, wherein said polypeptide further comprises a signal peptide.~~

~~4.The method of claim 3, wherein the sequence of said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.~~

~~5.~~2. The ~~method~~ use of claim 1, wherein at least one CTP is glycosylated.

~~6.~~3. The ~~method~~ use of claim 1, wherein at least one CTP is truncated.

~~7.~~4. The ~~method~~ use of claim 1, wherein at least one CTP is attached to said growth hormone via a linker.

~~8.~~5. The ~~method~~ use of claim ~~7~~ 4, wherein said linker is a peptide bond.

~~9.The method of claim 1, wherein said growth hormone is administered once weekly or once bi-weekly.~~

~~10.The method of claim 1, wherein said growth hormone is administered at a dose of 0.05-7.2 mg/administration.~~

~~11.The method of claim 1, wherein said growth hormone is administered at a dose of approximately 2 mg/administration.~~

~~12.The method of claim 1, wherein said growth hormone is administered at a dose of approximately 4 mg/administration.~~

~~13.The method of claim 1, wherein said growth hormone is administered at a dose of approximately 1.2 mg/administration.~~

~~14.The method of claim 1, wherein said growth hormone is administered subcutaneously to said subject.~~

~~15.~~6. Use of ~~A method of increasing insulin-like growth factor (IGF-1) levels in a human subject, comprising administering to said subject~~ a therapeutically effective amount of a 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, for the preparation of a medicament for increasing insulin-like growth factor (IGF-1) levels in a human subject~~thereby increasing IGF-1 levels in said subject~~.

~~16.The method of claim 15, 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.~~

~~17.The method of claim 15, wherein said polypeptide further comprises a signal peptide.~~

~~18.The method of claim 17, wherein said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.~~

~~19.The method of claim 15, wherein said growth hormone is administered once weekly or once bi-weekly.~~

~~20.The method of claim 15, wherein said growth hormone is administered at a dose of 0.05-7.2 mg /administration.~~

~~21.The method of claim 15, wherein said growth hormone is administered at a dose of approximately 2 mg/administration.~~

~~22.The method of claim 15, wherein said growth hormone is administered at a dose of approximately 4 mg/administration.~~

~~23.The method of claim 15, wherein said growth hormone is administered at a dose of approximately 1.2 mg/administration.~~

~~24.The method of claim 15, wherein said growth hormone is administered subcutaneously to said subject.~~

~~25.~~7. Use of ~~A method of reducing the dosing frequency of a growth hormone in a human subject, comprising the step of attaching~~ one chorionic gonadotrophin carboxy terminal peptide (CTP) attached to the amino terminus of said growth hormone and two chorionic gonadotrophin CTPs to the carboxy terminus of said growth hormone, for the preparation of a medicament for ~~thereby~~ reducing the dosing frequency of a growth hormone in a human subject.

~~26.The method of claim 25, 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.~~

~~27.The method of claim 25, further comprising the step of attaching a signal peptide to said amino terminus of a CTP.~~

~~28.The method of claim 27, wherein said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.~~

~~29.The method of claim 25, wherein said growth hormone is administered once weekly or once bi-weekly.~~

~~30.The method of claim 25, wherein said growth hormone is administered at a dose of 0.05-7.2 mg /administration.~~

~~31.The method of claim 25, wherein said growth hormone is administered at a dose of approximately 2 mg/administration.~~

~~32.The method of claim 25, wherein said growth hormone is administered at a dose of approximately 4 mg/administration.~~

~~33.The method of claim 25, wherein said growth hormone is administered at a dose of approximately 1.2 mg/administration.~~

~~34.The method of claim 25, wherein said growth hormone is administered subcutaneously to said subject.~~

~~35.~~8. Use of ~~A method of inducing growth or weight gain in a human subject, comprising administering to said subject~~ a therapeutically effective amount of a 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, for the preparation of a medicament for inducing

growth or weight gain in a human subject, wherein said subject is a child or adolescent~~, thereby inducing growth or weight gain in said subject~~.

~~36.The method of claim 35, 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.~~

~~37.The method of claim 35, wherein said polypeptide further comprises a signal peptide.~~

~~38.The method of claim 38, wherein the sequence of said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.~~

~~39.~~9. The ~~method~~ use of claim ~~35~~8, wherein at least one CTP is glycosylated.

~~40.~~10. The ~~method~~ use of claim ~~35~~8, wherein at least one CTP is truncated.

~~41.~~11. The ~~method~~ use of claim ~~35~~8, wherein at least one CTP is attached to said growth hormone via a linker.

~~42.~~12. The ~~method~~ use of claim ~~41~~11, wherein said linker is a peptide bond.

~~43.The method of claim 35, wherein said growth hormone is administered once weekly or once bi-weekly.~~

~~44.The method of claim 35, wherein said growth hormone is administered at a dose of 0.05-7.2 mg/administration.~~

~~45.The method of claim 35, wherein said growth hormone is administered at a dose of approximately 2 mg/administration.~~

~~46.The method of claim 35, wherein said growth hormone is administered at a dose of approximately 4 mg/administration.~~

~~47.The method of claim 35, wherein said growth hormone is administered at a dose of approximately 1.2 mg/administration.~~

~~48.The method of claim 35, wherein said growth hormone is administered subcutaneously to said subject.~~

~~49.~~13. Use of ~~A method of maintaining insulin-like growth factor (IGF-1) levels within a normal therapeutic range in a subject, the method comprising administering to said subject a~~

therapeutically effective amount of a 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, for the preparation of a medicament for maintaining insulin-like growth factor (IGF-1) levels within a normal therapeutic range in a subject ~~thereby maintaining IGF-I within a normal therapeutic range in said subject~~.

~~50.~~14. The ~~method~~ use of any one of claims ~~claim 49~~1, 6, 7, 8 and 13, 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.

~~51.~~15. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said polypeptide further comprises a signal peptide.

~~52.~~16. The ~~method~~ use of claim ~~51~~15, wherein said signal peptide comprises the amino acid sequence as set forth in SEQ ID NO: 3.

~~53.~~17. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said growth hormone is administered once weekly or once bi-weekly.

~~54.~~18. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said growth hormone is administered at a dose of 0.05-7.2 mg /administration.

~~55.~~19. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said growth hormone is administered at a dose of approximately 2 mg/administration.

~~56.~~20. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said growth hormone is administered at a dose of approximately 4 mg/administration.

~~57.~~21. The ~~method~~ use of any one of claims 1, 6, 7, 8 and 13~~claim 49~~, wherein said growth hormone is administered at a dose of approximately 1.2 mg/administration.

~~58.~~22. The ~~method~~ use of ~~claim~~ any one of claims 1, 6, 7, 8 and 13~~49~~, wherein said growth hormone is administered subcutaneously to said subject.