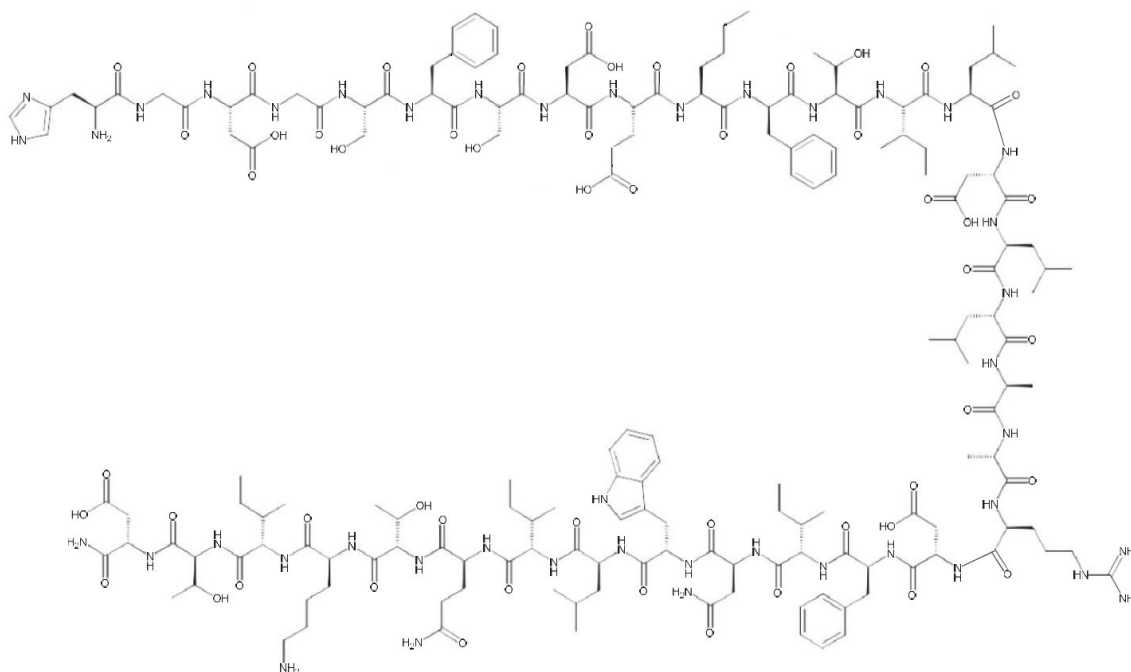


What is claimed is:

1. A sodium salt of apraglutide having a purity of no less than 95%, wherein apraglutide has the following structure:



2. The sodium salt of apraglutide of claim 1, wherein the sodium salt of apraglutide has a purity of no less than 97%.
3. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises no more than 3% of a Des-Gly⁴ apraglutide impurity.
4. The sodium salt of apraglutide of any one of the preceding claims, wherein the sum of Aspartimide³ apraglutide, Asp³³-OH apraglutide and Des-Ser⁷ apraglutide impurities in the sodium salt of apraglutide is no more than 2%.
5. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises no more than 2% of a [Trp²⁵, 2-(2,4,6-trimethoxyphenyl)] apraglutide impurity.

6. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises no more than 1.5% of a β -Asp³ apraglutide impurity.
7. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises no more than 1% of a β -Asp³ apraglutide impurity.
8. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises no more than 1% of a D-His apraglutide impurity.
9. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide comprises:
 - no more than 1% of a Asp³³-OH apraglutide impurity,
 - no more than 1% of a Des-Ser⁷ apraglutide impurity,
 - no more than 1% of a D-Aspartimide³ apraglutide impurity,
 - no more than 1% of a [Trp²⁵, 2-(2,4,6-trimethoxyphenyl)] apraglutide impurity, and
 - wherein the sum of Des-Gly⁴ apraglutide and Aspartimide³ apraglutide impurities in the sodium salt of apraglutide is no more than 1%.
10. The sodium salt of apraglutide of any one of the preceding claims, wherein the sodium salt of apraglutide is provided as a lyophilized powder.
11. A pharmaceutical composition comprising the sodium salt of apraglutide of any one of the preceding claims.
12. The pharmaceutical composition of claim 11, further comprising at least one of glycine, L-histidine and mannitol.
13. A pharmaceutical composition of claim 12, wherein the pharmaceutical composition comprises:
 - about 12.5 mg of apraglutide (sodium salt);
 - about 1.88 mg of glycine;
 - about 3.88 mg of L-histidine;
 - about 57.5 mg of mannitol.

14. The pharmaceutical composition of claim 12 or claim 13, wherein the pharmaceutical composition is provided as a lyophilized powder.
15. A two-chamber powder syringe comprising the sodium salt of apraglutide of any one of claims 1-10 or the pharmaceutical composition of any one of claims 11-14.
16. A method of making a GLP-2 analog peptide comprising:
- a) performing solid phase peptide synthesis (SPPS) to synthesize the GLP-2 analog peptide on an Fmoc-Rink-amid-MethylBenzHydril Amine(MBHA)-resin;
 - b) cleaving the synthesized GLP-2 analog peptide off the resin and deprotecting the side chains of the synthesized GLP-2 analog peptide by treating the resin with a solution comprising trifluoroacetic acid (TFA), water, and anisole;
 - c) purifying the synthesized GLP-2 analog peptide from step (b) by performing a first preparative reversed-phase high performance liquid chromatography (RP-HPLC) purification using TFA-based mobile phases, thereby producing a solution comprising the GLP-2 analog peptide with a purity of no less than 90%;
 - d) purifying the product of step (c) by performing a second RP-HPLC purification, using NaHCO_3 -based mobile phases, thereby producing solution comprising the GLP-2 analog peptide with a purity of no less than 97%.
17. The method of claim 16, further comprising:
- e) further purifying the product from step (d) by performing a third RP-HPLC purification using NaOAc-based mobile phases, thereby producing a solution comprising the sodium salt of the GLP-2 analog peptide with a purity of no less than 97%.
18. The method of claim 17, further comprising:
- f) adjusting the pH solution comprising the sodium salt of the GLP-2 analog peptide to about pH 7.9 using 0.1% AcOH in water;
 - g) passing the product of step (f) through a filter with a pore size of 0.2 μm ;
 - h) lyophilizing the product of step (g), thereby producing lyophilized sodium salt of the GLP-2 analog peptide with a purity of no less than 97%.

19. The method of claim 16, further comprising:
c)(i) performing a decarboxylation of the synthesized GLP-2 analog peptide by solubilizing the peptide in a solution comprising water and acetonitrile in ammonia buffer.
20. The method of claim 19, wherein the pH of the solution comprising water and acetonitrile in ammonia buffer is adjusted to about pH 8.0.
21. The method of any one of claims 16-20, wherein step (a) comprises:
i) preparing a MBHA-resin on which the SPPS will be performed;
ii) performing an initial Fmoc deprotection reaction followed by a coupling reaction to add a first Fmoc-protected amino acid to the resin, thereby forming a protected peptide on the resin;
iii) performing an Fmoc deprotection reaction followed by a coupling reaction to append at least one Fmoc-protected amino acid to the protected peptide;
iv) repeating step iii until the GLP-2 analog peptide is synthesized on the resin to produce a Fmoc-protected and side-chain protected GLP-2 analog peptide linked to the resin;
v) performing an Fmoc deprotection reaction to produce a side-chain protected GLP-2 analog peptide linked to the resin; and
vi) drying the side-chain protected GLP-2 analog peptide linked to the resin.
22. The method of claim 21, wherein step (a)(i) comprises:
(a1) washing the resin with a solution comprising dimethylformamide (DMF) and *N,N*-Diisopropylethylamine (DIEA) at 5 mL of solution per gram of resin under an N₂ atmosphere;
(b1) coupling a Rink amide linker to the resin in a solution comprising 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate, Hexafluorophosphate Benzotriazole Tetramethyl Uronium (HBTU), DIEA and Hydroxybenzotriazole (HOBt) in DMF;
(c1) washing the product formed in step (b1) with DMF;
(d1) performing a reduction reaction by contacting the resin with a solution comprising acetic anhydride (Ac₂O) and DIEA in DMF; and
(e1) washing the product formed in step (d1) with DMF.
23. The method of claim 21 or claim 22 wherein performing an Fmoc deprotection

reaction followed by a coupling reaction comprises:

- (a2) treating the resin with a solution comprising piperidine in DMF;
- (b2) washing the resin with DMF;
- (c2) washing the resin with a solution comprising DMF and oxyma;
- (d2) contacting the resin with at least one Fmoc-protected amino acid and a first amount of a solution comprising diisopropylcarbodiimide (DIC) and ethyl cyanohydroxyiminoacetate (oxyma);
- (e2) contacting the resin with a second amount of a solution comprising DIC and oxyma; and
- (f2) washing the product formed in step (e2) with DMF.

24. The method of claim 23, wherein the resin is contacted with the second amount of a solution comprising DIC and oxyma about 30 minutes after contacting the resin with the first amount of a solution comprising DIC and oxyma.

25. The method of claim 21 or claim 22 wherein performing an Fmoc deprotection reaction followed by a coupling reaction comprises:

- (a2) treating the resin with a solution comprising piperidine and oxyma in DMF;
- (b2) washing the resin with DMF;
- (c2) washing the resin with a solution comprising DMF and oxyma;
- (d2) contacting the resin with at least one Fmoc-protected amino acid and a first amount of a solution comprising diisopropylcarbodiimide (DIC) and ethyl cyanohydroxyiminoacetate (oxyma);
- (e2) contacting the resin with a second amount of a solution comprising DIC and oxyma; and
- (f2) washing the product formed in step (e2) with DMF.

26. The method of claim 25, wherein the resin is contacted with a first amount of a solution comprising piperidine and oxyma in DMF for 15 minutes followed by contacting the resin with a second amount of a solution comprising piperidine and oxyma in DMF for 30 minutes.

27. The method of any one of claims 23 to 26, wherein the at least one Fmoc-protected amino acid is Fmoc-Gln(Trt)-Thr($\psi^{\text{Me,Me}}_{\text{pro}}$)-OH.

28. The method of any one of claims 23 to 26, wherein the at least one Fmoc-protected amino acid is Fmoc-Gly(Tmb)-OH.
29. The method of any one of claims 23 to 26, wherein the at least one protected amino acid is Boc-His(Trt)-Gly-OH.
30. The method of any one of claims 23-29, wherein the method further comprises, between steps (e2) and (f2), performing a coupling test, wherein the coupling test is a Kaiser test.
31. The methods of any one of claims 16-30, wherein the GLP-2 analog peptide is apraglutide.
32. A composition comprising the GLP-2 analog peptide produced using the method of any of claims 16-31.
33. Use of apraglutide, or pharmaceutically acceptable salt thereof in the manufacture of a medicament for treating short bowel syndrome associated intestinal failure (SBS-IF) or short bowel syndrome associated intestinal insufficiency (SBS-II) in a subject,
wherein the apraglutide or pharmaceutically acceptable salt thereof is to be administered at a dose of about 2.5 mg/week when the subject has a body weight of less than 50 kg, or
wherein the apraglutide or pharmaceutically acceptable salt thereof is to be administered at a dose of about 5 mg/week when the subject has a body weight greater than or equal to 50 kg.
34. The use of claim 33, wherein the apraglutide, or pharmaceutically acceptable salt thereof, is to be administered by subcutaneous injection.
35. The use of claim 33 or claim 34, wherein the subject has colon-in-continuity, and wherein the apraglutide, or pharmaceutically acceptable salt thereof is to be administered for about 48 weeks.

36. The use of claim 35, wherein the subject has greater than 50% colon-in-continuity.
37. The use of claim 33 or claim 34, wherein the subject has at least one stoma, and wherein the apraglutide is to be administered for about 24 weeks.
38. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases the intestinal absorption of dietary intake wet weight in a subject relative to an untreated or placebo treated subject.
39. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof decreases fecal output in a subject relative to an untreated or placebo treated subject.
40. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases absolute urine volume output in a subject relative to an untreated or placebo treated subject.
41. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases intestinal absorption of sodium and potassium in a subject relative to an untreated or placebo treated subject.
42. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases sodium and potassium urine excretion in a subject relative to an untreated or placebo treated subject.
43. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases intestinal absorption of energy in a subject relative to an untreated or placebo treated subject.
44. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof decreases the energy content of fecal output in a subject relative to an untreated or placebo treated subject.
45. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically

acceptable salt thereof increases intestinal absorption of carbohydrates, proteins, and lipids in a subject relative to an untreated or placebo treated subject.

46. The use of claim 33, wherein the administration of apraglutide or a pharmaceutically acceptable salt thereof increases citrulline concentration in a subject relative to an untreated or placebo treated subject.

47. The sodium salt of apraglutide of any one of claims 1-10 or the pharmaceutical composition of any one of claims 11-14 for use in therapy.