What is claimed is:

1. An isolated or purified octadecaneuropeptide (ODN) or synthetic derivative thereof, comprising an amino acid sequence selected from one or more of SEQ ID NOS:1 to SEQ ID NO: 21 or a functional fragment thereof, or a sequence having at least 95% identity thereto, said octadecaneuropeptide modulating food intake, and body weight.

2. The octadecaneuropeptide of claim 1, wherein said octadecaneuropeptide inhibits emesis and nausea.

3. The octadecaneuropeptide of claim 1 or claim 2, comprising one or more of

i) modified amino acids listed in Table 2, and, or

ii) Gln(alkyn), Ala(Alkyn), Gly(Alkyn) and Lys(N3).

4. The octadecaneuropeptide of claim 3, wherein said modified amino acid facilitates bioconjugation of an agent selected from one or more of a N and, or C terminus protection moiety, a lipid, a recombinant FC-peptide, a cell penetrating peptide, and enhances one or more of peptide function, stability, and bioavailability.

5. The octadecaneuropeptide of any one of the preceding claims, which is a synthetic derivative of SEQ ID NO:3 or a functional modified variant thereof.

6. A composition comprising the octadecaneuropeptide of any one of the preceding claims in a pharmaceutically acceptable carrier or buffer.

7. A nucleic acid sequence that encodes any one of the octadecaneuropeptides having amino acid SEQ ID NOS: 1 to SEQ ID NO: 21 of claim 1.

8. The nucleic acid of claim 7, which encodes the polypeptide of SEQ ID NO: 3.

9. The nucleic acid of claim 7 or claim 8, encapsulated in a liposome or an extracellular vesicle or affixed to a nanoparticle or lipid nanoparticle.

10. A vector comprising the nucleic acid of claim 7 or claim 8.

11. The vector of claim 10, which is a plasmid vector, a lentiviral vector, an AAV vector, AAV9, and AAV8.

12. The vector of claim 10 or claim 11, encapsulated in a liposome or an extracellular vesicle or affixed to a nanoparticle or lipid nanoparticle.

13. A composition comprising the nucleic acid encoding the octadecaneuropeptide of any one of the preceding claims in a pharmaceutically acceptable carrier or buffer.

14. Use of the composition of claim 6 or the composition of claim 13, in the manufacture of a medicament for the treatment of a metabolic disease or disorder in a patient in need thereof, wherein an effective amount of the composition of claim 6 or the composition of claim 13 is to be administered to the patient.

15. The use of claim 14, wherein the metabolic disease or disorder is selected from obesity, diabetes mellitus, dyslipidemia, insulin resistance, hepatic steatosis, hypercholesterolemia, and non-alcoholic fatty liver.

16. The use of claim 15, wherein the diabetes mellitus is selected from type 1 or type 2 diabetes.

17. The use of any one of claims 14-16, wherein a second therapeutic agent is to be further administered to the patient, wherein the second therapeutic agent treats or inhibits progress at least one disorder selected from obesity, diabetes mellitus, dyslipidemia, insulin resistance, hepatic steatosis, hypercholesterolemia, and non-alcoholic fatty liver.

18. The use of any one of claims 14-17, further comprising providing the patient with lifestyle intervention on diet and/or physical activity on said subject.

19. The use of any one of claims 14-17, wherein the patient has a reduced food intake for 1, 3, 6, and/or 24 hours after administration of said peptide or nucleic acid encoding said peptide when compared to an untreated control.

20. The use of any one of claims 14-17, wherein the weight of the patient decreases following administration of the peptide.

21. The use of any one of claims 14 to 20, wherein the patient is to be assessed for a reduction in symptoms associated with at least one disorder selected from obesity, diabetes mellitus, dyslipidemia, insulin resistance, hepatic steatosis, hypercholesterolemia, and non-alcoholic fatty liver.

22. The use of any one of claims 14 to 20, wherein said composition or carrier is formulated to cross the blood brain barrier and administration is via an intracranial, intraparenchymal, cerebro-ventricular, or transmeningeal route.

23. The use of any one of claims 14 to 20, wherein administration of said peptide is via a route selected from systemic, parenteral, transdermal patch, intramuscular, subcutaneously, buccal swab and oral.

24. The use of any one of claims 14 to 23, wherein said composition is effective inhibit relaxin-3 receptor producing anorexic effects.

25. The use of any one of claims 14 to 22 wherein said composition functions to modulate one or more of;

i) improve glucose tolerance;

ii) modulate relaxin-3 receptor activity;

iii) regulate the counterregulatory response and attenuate 5-tg induced hyperglycemia;

iv) improve insulin sensitivity;

v) promote weight loss; and

v) penetrate into the brain.