

Claims

1. A pharmaceutical composition comprising a therapeutically active agent, an absorption enhancer, and a polymer comprising a plurality of alkaline groups, wherein a concentration of said polymer in the composition is at least 10 weight percent of the total weight of the composition, said absorption enhancer being a substituted or non-substituted fatty acid or a salt thereof, wherein said therapeutically active agent is a polypeptide selected from a glucagon-like peptide-1 and a glucagon-like peptide-1 receptor agonist.
2. The composition of claim 1, wherein at least a portion of said alkaline groups are carboxylate groups.
3. The composition of claim 2, wherein at least a portion of said carboxylate groups are in a form of a pharmaceutically acceptable salt.
4. The composition of any one of claims 1 to 3, wherein said absorption enhancer comprises NAC or a salt thereof.
5. The composition of any one of claims 1 to 4, wherein a concentration of said absorption enhancer is at least 50 weight percent of the total weight of the composition.
6. The composition of any one of claims 1 to 5, wherein a concentration of said polymer is at least 20 weight percent of the total weight of the composition.
7. The composition of any one of claims 1 to 6, wherein a total concentration of said absorption enhancer and said polymer is at least 80 weight percent of the total weight of the composition.
8. The composition of any one of claims 1 to 7, wherein a concentration of said alkaline groups in the composition is at least 0.1 millimoles per gram.

9. The composition of any one of claims 1 to 8, wherein said polymer is a crosslinked polymer.
10. The composition of any one of claims 1 to 9, wherein said polymer comprises a polysaccharide.
11. The composition of claim 10, wherein said polysaccharide is selected from a starch derivative and a cellulose derivative.
12. The composition of any one of claims 1 to 11, wherein said polymer comprises carboxymethyl groups.
13. The composition of any one of claims 1 to 12, wherein said polymer is characterized by a pKa in a range of from 1.2 to 7.5.
14. The composition of any one of claims 1 to 13, wherein said glucagon-like peptide-1 receptor agonist is exenatide and/or lixisenatide.
15. The composition of any one of claims 1 to 13, wherein said therapeutically active agent is selected from liraglutide, semaglutide, taspoglutide, exenatide, lixisenatide, dapiglutide and tirzepatide.
16. The composition of any one of claims 1 to 15, being in a form of a unit dosage form.
17. The composition of claim 16, wherein an amount of said alkaline groups in the unit dosage form is at least 0.03 millimoles.
18. The composition of any one of claims claim 16 or 17, wherein said unit dosage form comprises one or more tablet(s).

19. Use of the composition of any one of claims 1 to 18 in the manufacture of a medicament for the treatment of a condition treatable by said therapeutically active agent, wherein the medicament is to be orally administered.

20. The use according to claim 19, wherein said condition is selected from an addiction, adipocyte dysfunction, Alzheimer's Disease, arthritis, cardiovascular diseases and disorder, cataract, cirrhosis, diabetes, diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, dyslipidemia, eating disorders, erectile dysfunction, fibrosis, gastrointestinal diseases and disorders, hepatocellular carcinoma, hyper-apo B lipoproteinemia, hyperglycemia, hyperinsulinemia, hyperuricemia, impaired cognition, impaired glucose metabolism, impaired glucose tolerance, insulin resistance, intermittent claudication, ketosis, kidney diseases and disorders, macular degeneration, metabolic acidosis, metabolic syndrome, non-alcoholic fatty liver, non-alcoholic steatohepatitis, obesity and related comorbidities, osteoporosis, Parkinson's Disease, polycystic ovary syndrome, post-prandial lipemia, premenstrual syndrome, psoriasis, restenosis, schizophrenia, skin and connective tissue diseases and disorders, sleep apnea, traumatic brain injury, ulcerations, visceral adipose deposition, and weight gain associated with a therapeutic agent.