CLAIMS

1. A pharmaceutical composition comprising:

a calcitonin gene-related peptide (CGRP) inhibitor, and

an absorption increasing amount of a carbohydrate surfactant; wherein the carbohydrate surfactant comprises an alkyl glycoside.

2. The pharmaceutical composition according to Claim 1, wherein the pharmaceutical composition is in a form of an oral solid molded fast-dispersing dosage form.

3. The pharmaceutical composition according to Claim 1 or 2, further comprising a carrier.

4. The pharmaceutical composition according to Claim 3, wherein the carrier is gelatin.

5. The pharmaceutical composition according to any one of Claims 1 to 4, further comprising a filler.

6. The pharmaceutical composition according to Claim 5, wherein the filler is mannitol.

7. The pharmaceutical composition according to any one of Claims 1 to 6, further comprising a flavorant.

8. The pharmaceutical composition according to any one of Claims 1 to 7, wherein the CGRP inhibitor comprises a CGRP antagonist and the pharmaceutical composition comprises from about 70-80 weight% of the CGRP antagonist.

9. The pharmaceutical composition according to any one of Claims 4 to 8, wherein the CGRP inhibitor comprises a CGRP antagonist and the pharmaceutical composition comprises from about 70-80 weight% of the CGRP antagonist and about 10-20 weight% of gelatin.

10. The pharmaceutical composition according to any one of Claims 5 to 9, wherein the CGRP inhibitor comprises a CGRP antagonist and the pharmaceutical composition comprises from about

70-80 weight% of the CGRP antagonist, about 10-20 weight% of gelatin, and about 10-20 weight% of a filler.

11. The pharmaceutical composition according to any one of Claims 7 to 10, wherein the CGRP inhibitor comprises a CGRP antagonist and the pharmaceutical composition comprises from about 70-80 weight% of the CGRP antagonist, about 10-20 weight% of gelatin, about 10-20 weight% of a filler, and 0.1-5.0 weight% of a flavorant.

12. The pharmaceutical composition according to any one of Claims 1 to 11, wherein the CGRP inhibitor is a CGRP antagonist and the pharmaceutical composition comprises from about 10-80 weight% of the CGRP antagonist, about 0.01-50 weight% of the alkyl glycoside, about 10-30 weight% of fish gelatin, and about 10-25 weight% of a filler.

13. The pharmaceutical composition according to any one of Claims 2 to 12, wherein the pharmaceutical composition is capable of disintegrating or dispersing within an interval selected from 1 to 60 seconds, 1 to 30 seconds, 1 to 10 seconds, and 2 to 8 seconds, after being placed in contact with a fluid.

14. The pharmaceutical composition according to Claim 13, wherein the fluid comprises saliva.

15. The pharmaceutical composition according to any one of Claims 1 to 14, wherein the CGRP inhibitor is a CGRP antibody, a CGRP receptor antibody, an antigen-binding fragment from a CGRP antibody or a CGRP receptor antibody, a CGRP infusion inhibitory protein, a CGRP bio-neutralizing agent, a CGRP antagonist, a small molecule CGRP inhibitor, or a polypeptide CGRP inhibitor.

16. The pharmaceutical composition according to Claim 15, wherein the CGRP inhibitor is the CGRP antagonist.

17. The pharmaceutical composition according to Claim 16, wherein the CGRP antagonist has molecular weight of 900 g/mol or less.

18. The pharmaceutical composition according to Claim 16 or 17, wherein the CGRP antagonist has oral bioavailability of 80% or less.

19. The pharmaceutical composition according to any one of Claims 16 to 18, wherein the CGRP antagonist is zavegepant, rimegepant, ubrogepant, atogepant, telcagepant, or olcegepant.

20. The pharmaceutical composition according to any one of Claims 1 to 19, wherein the carbohydrate surfactant further comprises a carbohydrate ester.

21. The pharmaceutical composition according to any one of Claims 1 to 20, wherein the alkyl glycoside comprises a carbohydrate linked by a glycosidic linkage to a C10-C16 alkyl chain.

22. The pharmaceutical composition according to Claim 21, wherein the alkyl glycoside has a hydrophile-lipophile balance number in the range of about 10 to 20.

23. The pharmaceutical composition according to Claim 21 or 22, wherein the carbohydrate is a monocarbohydrate or a dicarbohydrate.

24. The pharmaceutical composition according to Claim 23, wherein the monocarbohydrate is maltose, and wherein the dicarbohydrate is sucrose.

25. The pharmaceutical composition according to any one of Claims 1 to 24, wherein the alkyl glycoside is a D-alkyl glycoside.

26. The pharmaceutical composition according to Claim 25, wherein the D-alkyl glycoside is a D-β-alkyl glycoside.

27. The pharmaceutical composition according to Claim 26, wherein the D-β-alkyl glycoside is undecyl D-β-maltoside, dodecyl D-β-maltoside, tridecyl D-β-maltoside, tetradecyl D-β-maltoside, D-β-sucrose monododecanoate, or a combination thereof.

28. The pharmaceutical composition according to any one of Claims 1 to 27, wherein the CGRP receptor antagonist is zavegepant, and wherein the alkyl glycoside is dodecyl D-β-maltoside.

29. The pharmaceutical composition according to any one of Claims 1 to 28, further comprising a mucosal delivery-enhancing agent.

30. The pharmaceutical composition according to Claim 29, wherein the mucosal delivery-enhancing agent is citric acid, sodium citrate, propylene glycol, glycerin, ascorbic acid, sodium metabisulfite, ethylenediaminetetraacetic acid (EDTA) disodium, benzalkonium chloride, sodium hydroxide, or a combination thereof.

31. The pharmaceutical composition according to any one of Claims 1-30, wherein the alkyl glycoside concentration is between about 0.05% and 20% weight to volume.

32. The pharmaceutical composition according to any one of Claims 1-31, wherein the alkyl glycoside concentration is between about 0.05% and 10% weight to volume.

33. The pharmaceutical composition according to any one of Claim 1-32, wherein the alkyl glycoside concentration is between about 0.05% and 5% weight to volume.

34. The pharmaceutical composition according to any one of Claims 1-33, wherein the composition provides an $AUC_{0\text{-}4\ hr}$ for the CGRP receptor antagonist of about 1.25 fold or greater as compared to a corresponding $AUC_{0\text{-}4\ hr}$ provided in the absence of the alkyl glycoside.

35. The pharmaceutical composition according to any one of Claims 1-34, wherein the composition provides a C_{max} for the CGRP receptor antagonist of about 1.15 fold or greater as compared to a corresponding C_{max} provided in the absence of the alkyl glycoside.

36. The pharmaceutical composition according to any one of Claims 4-35, wherein the composition provides a T_{max} for the CGRP receptor antagonist of about 1.5 fold or greater as compared to a corresponding T_{max} provided in the absence of the alkyl glycoside.

37. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, a carbohydrate surfactant, and a therapeutically effective amount of zavegepant, a solvate thereof, or a pharmaceutically acceptable salt thereof, wherein the pharmaceutical composition is in a form of an oral solid molded fast-dispersing dosage form.

38. The pharmaceutical composition according to Claim 37, wherein carbohydrate surfactant is an alkyl glycoside, a carbohydrate ester, or a combination thereof.

39. The pharmaceutical composition according to Claim 38, wherein the pharmaceutical composition comprises 0.01 to 50 weight% of the alkyl glycoside.

40. The pharmaceutical composition according to any one of Claims 37 to 39, further comprising a carrier, a filler, and a flavorant.

41. The pharmaceutical composition according to Claim 40, wherein the carrier is gelatin and the filler is mannitol.

42. The pharmaceutical composition according to any one of Claims 37 to 41, comprising from about 70-80 weight% of zavegepant.

43. The pharmaceutical composition according to any one of Claims 37 to 42, comprising from about 70-80 weight% of zavegepant and about 10-20 weight% of gelatin.

44. The pharmaceutical composition according to any one of Claims 37 to 43, comprising from about 70-80 weight% of zavegepant, about 10-20 weight% of gelatin, and about 10-20 weight% of a filler.

45. The pharmaceutical composition according to any one of Claims 37 to 44, comprising from about 70-80 weight% of zavegepant, about 10-20 weight% of gelatin, about 10-20 weight% of a filler, and 0.1-5.0 weight% of a flavorant.

46. The pharmaceutical composition according to any one of Claims 37 to 45, wherein the pharmaceutical composition is capable of disintegrating or dispersing within an interval selected from 1 to 60 seconds, 1 to 30 seconds, 1 to 10 seconds, and 2 to 8 seconds, after being placed in contact with a fluid.

47. The pharmaceutical composition according to Claim 46, wherein the fluid comprises saliva.

48. A method for increasing bioavailability of a calcitonin gene-related peptide (CGRP) inhibitor in a subject, comprising an oral administration of the pharmaceutical composition according to any one of Claims 1 to 47, thereby increasing the bioavailability of the CGRP inhibitor in the subject.

49. The method according to Claim 48, wherein the CGRP receptor antagonist is zavegepant.

50. The method according to Claim 48 or 49, wherein the administration of the pharmaceutical composition results in T_{max} of about 1 hr.

51. The method according to any one of Claims 48 to 50, wherein the administration of the pharmaceutical composition results in C_{max} is about 37.0 ng/mL.

52. The method according to any one of Claims 48 to 51, wherein the administration of the pharmaceutical composition results in $AUC_{0\text{-}4\ hr}$ is about 55.1 hr*ng/mL.

53. Use of the pharmaceutical composition according to any one of Claims 1 to 47 in the manufacture of a medicament for the treatment of migraine in a subject, wherein the medicament is to be orally administered to the subject in need thereof.

54. Use of the pharmaceutical composition according to any one of Claims 1 to 47 in the manufacture of a medicament for providing rapid onset of migraine pain relief in a subject, wherein the medicament is to be orally administered to the subject in need thereof.

55. Use of the pharmaceutical composition according to any one of Claims 1 to 47 in the manufacture of a medicament for providing a reduced incidence of migraine pain recurrence in a subject, wherein the medicament is to be orally administered to the subject in need thereof.

56. Use of the pharmaceutical composition according to any one of Claims 1 to 47 in the manufacture of a medicament for the treatment or prevention of a condition associated with aberrant levels of CGRP in a subject, wherein the medicament is to be administered to the subject in need thereof.

57. The use according to Claim 56, wherein the CGRP inhibitor is a CGRP antibody, a CGRP receptor antibody, an antigen-binding fragment from a CGRP antibody or a CGRP receptor antibody, a CGRP infusion inhibitory protein, a CGRP bio-neutralizing agent, a small molecule CGRP receptor antagonist, a small molecule CGRP inhibitor, or a polypeptide CGRP inhibitor.

58. The use according to Claim 57, wherein the small molecule CGRP receptor antagonist is zavegepant, rimegepant, ubrogepant, atogepant, telcagepant, or olcegepant, a solvate thereof, or a pharmaceutically acceptable salt thereof.

59. The use according to any one of Claims 56 to 58, wherein the condition is a disorder selected from acute migraine, chronic migraine, cluster headache, chronic tension type headache, medication overuse headache, post-traumatic headache, post-concussion syndrome, brain trauma, and vertigo.

60. The use according to any one of Claims 56 to 58, wherein the condition is a disorder selected from chronic pain, neurogenic vasodilation, neurogenic inflammation, inflammatory pain, neuropathic pain, diabetic peripheral neuropathic pain, small fiber neuropathic pain, Morton's neuroma, chronic knee pain, chronic back pain, chronic hip pain, chronic finger pain, exercise-induced muscle pain, cancer pain, chronic inflammatory skin pain, pain from burns, pain from scars, complex regional pain syndrome, burning mouth syndrome, alcoholic polyneuropathy, chronic inflammatory demyelinating polyradiculoneuropathy, human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS)-associated neuropathy, drug-induced neuropathy, industrial neuropathy, lymphomatous neuropathy, myelomatous neuropathy, multi-focal motor neuropathy, chronic idiopathic sensory

neuropathy, carcinomatous, neuropathy, acute pain autonomic neuropathy, compressive neuropathy, vasculitic/ischaemic neuropathy, tempero-mandibular joint pain, post-herpetic neuralgia, trigeminal neuralgia, chronic regional pain syndrome, eye pain, and tooth pain.

61. The use according to any one of Claims 56 to 58, wherein the condition is a disorder selected from non-insulin dependent diabetes mellitus, vascular disorders, inflammation, arthritis, thermal injury, circulatory shock, sepsis, alcohol withdrawal syndrome, opiate withdrawal syndrome, morphine tolerance, hot flashes in men and women, flushing associated with menopause, allergic dermatitis, psoriasis, encephalitis, ischaemia, stroke, epilepsy, neuroinflammatory disorders, neurodegenerative diseases, skin diseases, neurogenic cutaneous redness, skin rosaceousness, erythema, tinnitus, obesity, inflammatory bowel disease, irritable bowel syndrome, vulvodynia, polycystic ovarian syndrome, uterine fibroids, neurofibromatosis, hepatic fibrosis, renal fibrosis, focal segmental glomerulosclerosis, glomerulonephritis, IgA nephropathy, multiple myeloma, myasthenia gravis, Sjogren's syndrome, osteoarthritis, osteoarthritic degenerative disc disease, temporomandibular joint disorder, whiplash injury, rheumatoid arthritis, and interstitial cystitis.

62. The use according to Claim 61, wherein the skin disease are selected from recurrent herpes, contact hypersensitivity, prurigo nodularis, chronic pruritus, and uremic pruritus.

63. The use according to any one of Claims 56 to 58, wherein the condition is a disorder selected from chronic obstructive pulmonary disease, pulmonary fibrosis, bronchial hyperreactivity, asthma, cystic fibrosis, chronic idiopathic cough, and a toxic injury.

64. The use according to Claim 63 wherein the toxic injury is selected from chlorine gas injury, mustard gas injury, acrolein injury, smoke injury, ozone injury, warfare chemical exposure, and industrial chemical exposure.