

WHAT IS CLAIMED IS:

1. A composition comprising (a) a therapeutically effective amount of calcium alpha-ketoglutarate, and (b) a controlled-release matrix.
2. The composition of claim 1 wherein the controlled-release matrix comprises
5 hydroxypropylmethylcellulose (HPMC).
3. The composition of claim 1 wherein the controlled-release matrix comprises HPMC with number average molecular weight of about 68,000-95,000.
4. The composition of claim 1 wherein the controlled-release matrix comprises HPMC with number average molecular weight of about 115,000-150,000.
- 10 5. The composition of claim 1 wherein the controlled-release matrix comprises HPMC with number average molecular weight of between about 68,000-95,000 and about 115,000-150,000.
6. The composition of any one of claims 1-5 wherein the amount of calcium alpha-ketoglutarate is from about 30% to about 65% by total weight of the composition.
- 15 7. The composition of any one of claims 1-6 comprising about 250 to about 1000 mg of calcium alpha-ketoglutarate.
8. The composition of any one of claims 1-6 comprising about 350 to about 1000 mg of calcium alpha-ketoglutarate.
9. The composition of any one of claims 1-6 comprising about 400 to about 600
20 mg of calcium alpha-ketoglutarate.
10. The composition of any one of claims 1-6 comprising about 525 mg of calcium alpha-ketoglutarate.
11. The composition of any one of claims 1-6 comprising at least about 10% dietary value of calcium.
- 25 12. The composition of any one of claims 1-6 comprising at least about 15% dietary value of calcium.
13. The composition of any one of claims 1-12 further comprising one or more excipients.
14. The composition of any one of claims 1-13 further comprising
30 microcrystalline cellulose.
15. The composition of any one of claims 1-14 further comprising lactose monohydrate.
16. The composition of any one of claims 1-15 further comprising one or more lubricants.

17. The composition of claim 16 wherein the lubricant is magnesium stearate.
18. The composition of any one of claims 1-17 further comprising one or more disintegrants.
19. The composition of claim 18 wherein the disintegrant is silicon dioxide.
- 5 20. The composition of any one of claims 1-19 further comprising a sweetener.
21. The composition of claim 20 wherein the sweetener is isomalt.
22. The composition of any one of claims 1-15 further comprising wax.
23. The composition of claim 22 wherein the wax is carnauba wax and/or rice bran wax.
- 10 24. The composition of any one of claims 1-23 characterized by a release rate of the calcium alpha-ketoglutarate that is about 90% or less of a release rate of calcium alpha-ketoglutarate of a calcium alpha-ketoglutarate composition that is uncontrolled or is formulated without the controlled-release matrix.
25. The composition of any one of claims 1-23 characterized by a release rate of
15 the calcium alpha-ketoglutarate that is about 70% or less of a release rate of calcium alpha-ketoglutarate of a calcium alpha-ketoglutarate composition that is uncontrolled or is formulated without the controlled-release matrix.
26. The composition of any one of claims 1-23 characterized by a release rate of the calcium alpha-ketoglutarate that is about 60% or less of a release rate of calcium alpha-
20 ketoglutarate of a calcium alpha-ketoglutarate composition that is uncontrolled or is formulated without the controlled-release matrix.
27. The composition of any one of claims 1-23 characterized by a release rate of the calcium alpha-ketoglutarate that is about 50% or less of a release rate of calcium alpha-ketoglutarate of a calcium alpha-ketoglutarate composition that is uncontrolled or is
25 formulated without the controlled-release matrix.
28. The composition of any one of claims 1-23 characterized by a release rate of the calcium alpha- ketoglutarate that is about 30% or less after a time between about 0.5 and about 2 hours in a dissolution medium as measured by a paddle apparatus with a basket rotating at 75 rpm, wherein the dissolution medium is 900 mL of about 0.03 M NaCl and
30 about 0.08 M HCl at about 37°C.
29. The composition of any one of claims 1-28 characterized by a release rate of the calcium alpha- ketoglutarate that is about 75% or more after a time between about 10 and about 11 hours in a dissolution medium as measured by a paddle apparatus with a basket rotating at 75 rpm, wherein the dissolution medium is 900 mL of about 0.03 M NaCl and

about 0.08 M HCl at about 37°C.

30. The composition of any one of claims 1-29 wherein the calcium alpha-ketoglutarate is calcium alpha-ketoglutarate monohydrate.

31. The composition of any one of claims 1-30 in the form of a dosage unit.

5 32. The composition of any one of claims 1-30 in the form of a dosage unit configured for oral administration.

33. The composition of any one of claims 1-30 in the form of a tablet.

34. The composition of any one of claims 1-30 in the form of a capsule.

35. A tablet comprising 525 mg of calcium alpha-ketoglutarate monohydrate, and
10 HPMC.