WHAT IS CLAIMED IS:

1. A composition comprising (a) a therapeutically effective amount of calcium alpha-ketoglutarate, and (b) a controlled-release matrix comprising an hydroxypropylmethylcellulose (HPMC).

2. The composition of claim 1 wherein the HPMC has a number average molecular weight of 68,000-95,000.

3. The composition of claim 1 wherein the HPMC has a number average molecular weight of 115,000-150,000.

4. The composition of claim 1 wherein the controlled-release matrix comprises a first HPMC with number average molecular weight of 68,000-95,000 and a second HPMC with number average molecular weight of 115,000-150,000.

5. The composition of any one of claims 1-4 wherein the amount of calcium alpha-ketoglutarate is from 30% to 65% by total weight of the composition.

6. The composition of any one of claims 1-5 comprising 250 to 1000 mg of calcium alpha-ketoglutarate.

7. The composition of any one of claims 1-5 comprising 350 to 1000 mg of calcium alpha-ketoglutarate.

8. The composition of any one of claims 1-5 comprising 400 to 600 mg of calcium alpha-ketoglutarate.

9. The composition of any one of claims 1-5 comprising about 525 mg of calcium alpha-ketoglutarate.

10. The composition of any one of claims 1-5 comprising at least about 10% dietary value of calcium.

11. The composition of any one of claims 1-5 comprising at least about 15% dietary value of calcium.

12. The composition of any one of claims 1-11 further comprising one or more excipients.

13. The composition of any one of claims 1-12 further comprising microcrystalline cellulose.

14. The composition of any one of claims 1-13 further comprising lactose monohydrate.

15. The composition of any one of claims 1-14 further comprising one or more lubricants.

16. The composition of claim 15 wherein the lubricant is magnesium stearate.

17. The composition of any one of claims 1-16 further comprising one or more disintegrants.

18. The composition of claim 17 wherein the disintegrant is silicon dioxide.

19. The composition of any one of claims 1-18 further comprising a sweetener.

20. The composition of claim 19 wherein the sweetener is isomalt.

21. The composition of any one of claims 1-20 further comprising wax.

22. The composition of claim 21 wherein the wax is carnauba wax and/or rice bran wax.

23. The composition of any one of claims 1-22 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.

24. The composition of any one of claims 1-22 characterized by a release rate of 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.

25. The composition of any one of claims 1-22 characterized by a release rate of the calcium alpha-ketoglutarate that is about 60% 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 1-22 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 formulated without the controlled-release matrix.

27. The composition of any one of claims 1-22 characterized by a calcium alpha-ketoglutarate dissolution profile wherein about 30% or less of the calcium alpha-ketoglutarate is dissolved 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 about 0.08 M HCl at about 37°C.

28. The composition of any one of claims 1-27 characterized by a calcium alpha-ketoglutarate dissolution profile wherein that is about 75% or more of the calcium alpha-ketoglutarate is dissolved 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.

29. The composition of any one of claims 1-28 wherein the calcium alpha-ketoglutarate is calcium alpha-ketoglutarate monohydrate.

30. The composition of any one of claims 1-29 in the form of a dosage unit.

31. The composition of any one of claims 1-29 in the form of a dosage unit configured for oral administration.

32. The composition of any one of claims 1-29 in the form of a tablet.

33. The composition of any one of claims 1-29 in the form of a capsule.

34. A tablet comprising 525 mg of calcium alpha-ketoglutarate monohydrate in a controlled-release matrix comprising an HPMC with number average molecular weight of 68,000-95,000, or an HPMC with number average molecular weight of 115,000-150,000, or a combination thereof.

35. The tablet of claim 34 wherein the controlled-release matrix comprises a first HPMC with number average molecular weight of 68,000-95,000 and a second HPMC with number average molecular weight of 115,000-150,000.