38. The beta-cryptoxanthin concentrate of any one of claims 34-37, wherein the plant material is selected from the group consisting of fruits, vegetables, and mixtures thereof.

39. The beta-cryptoxanthin concentrate of claim 38, wherein the plant material is from a capsicum.

40. The beta-cryptoxanthin concentrate of any one of claims 34-39, wherein the concentrate is in a dosage form selected from beadlets, microencapsulated powders, oil suspensions, liquid dispersions, capsules, pellets, ointments, soft gel capsules, tablets, chewable tablets or lotions/liquid preparations.

41. The beta-cryptoxanthin concentrate of any one of claims 34-40, wherein the concentrate is added to a composition.

42. The beta-cryptoxanthin concentrate of any one of claims 34-41, wherein the total xanthophylls comprise by-products selected from the group consisting of zeaxanthin, trans-capsanthin, beta-carotene, trace amounts of other carotenoids and combinations thereof.

43. The beta-cryptoxanthin concentrate of any one of claims 2-41, wherein said concentrate is used in a dietary supplement for protection against the development of rheumatoid, inflammatory arthritis.

44. A composition comprising beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

45. The composition of claim 44, wherein the total xanthophylls comprise by-products selected from zeaxanthin, trans-capsanthin, beta-carotene, trace amounts of other carotenoids such as capsorubin or violaxanthin, and combinations thereof.

46. The composition of either claim 44 or 45, wherein the composition further comprises a pharmaceutically acceptable ingredient or a food grade ingredient.

47. A method for the prophylaxis of the development of rheumatoid, inflammatory arthritis, or bone diseases, comprising administering to a patient in need thereof a therapeutically

effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

48. A method for strengthening of bone, comprising administering to a patient in need thereof a therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

49. A method for inhibiting bone resorption, comprising administering to a patient in need thereof a therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

50. The method of any one of claims 47-49, wherein the beta-cryptoxanthin concentrate is administered in an amount from about 0.0001 mg/kg to about 10 m/kg.

38. The beta-cryptoxanthin concentrate of any one of claims 34-37, wherein the plant material is selected from the group consisting of fruits, vegetables, and mixtures thereof.

39. The beta-cryptoxanthin concentrate of claim 38, wherein the plant material is from a capsicum.

40. The beta-cryptoxanthin concentrate of any one of claims 34-39, wherein the concentrate is in a dosage form selected from beadlets, microencapsulated powders, oil suspensions, liquid dispersions, capsules, pellets, ointments, soft gel capsules, tablets, chewable tablets or lotions/liquid preparations.

41. The beta-cryptoxanthin concentrate of any one of claims 34-40, wherein the concentrate is added to a composition.

42. The beta-cryptoxanthin concentrate of any one of claims 34-41, wherein the total xanthophylls comprise by-products selected from the group consisting of zeaxanthin, trans-capsanthin, beta-carotene, trace amounts of other carotenoids and combinations thereof.

43. The beta-cryptoxanthin concentrate of any one of claims 2-41, wherein said concentrate is used in a dietary supplement for protection against the development of rheumatoid, inflammatory arthritis.

44. A composition comprising beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

45. The composition of claim 44, wherein the total xanthophylls comprise by-products selected from zeaxanthin, trans-capsanthin, beta-carotene, trace amounts of other carotenoids such as capsorubin or violaxanthin, and combinations thereof.

46. The composition of either claim 44 or 45, wherein the composition further comprises a pharmaceutically acceptable ingredient or a food grade ingredient.

47. A therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total

xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin, for use in the prophylaxis of the development of rheumatoid, inflammatory arthritis, or bone diseases in a patient in need thereof.

48. A therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin, for use in the strengthening of bone in a patient in need thereof.

49. A therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin, for use in inhibiting bone resorption in a patient in need thereof.

50. The concentrate of any one of claims 47-49, wherein the beta-cryptoxanthin concentrate is to be administered in an amount from about 0.0001 mg/kg to about 10 m/kg.

51. The use of a therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material in the manufacture of a medicament for the prophylaxis of the development of rheumatoid, inflammatory arthritis, or bone diseases in a patient in need thereof, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

52. The use of a therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material in the manufacture of a medicament for the strengthening of bone in a patient in need thereof, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

53. The use of a therapeutically effective amount of a beta-cryptoxanthin concentrate derived from plant material in the manufacture of a medicament for inhibiting bone resorption in a patient in need thereof, wherein said concentrate comprises at least about 10% by weight total xanthophylls, of which at least about 75% by weight is trans-beta-cryptoxanthin.

54. The use of any one of claims 51-53, wherein the beta-cryptoxanthin concentrate is to be administered in an amount from about 0.0001 mg/kg to about 10 m/kg.