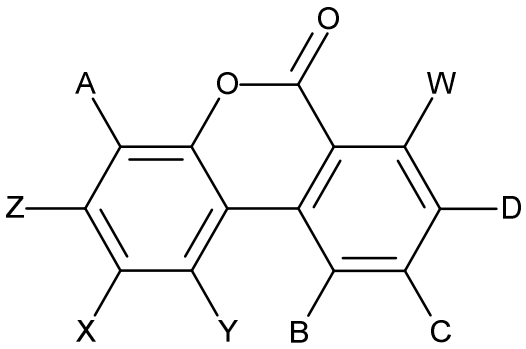
Claims

1. A composition comprising:

   a). a compound of formula (I) or a salt thereof:



(I)

wherein:

A, B, C and D are each independently selected from H and OH;

W, X and Y are each independently selected from H and OH; and

Z is selected from H and OH; and

(b) pectin.

2. A composition as claimed in claim 1 wherein the pectin is selected from low methoxy pectin, high methoxy pectin or amidated low methoxy-pectin, or a mixture thereof, for example, wherein the pectin is high methoxypectin.

3. A composition as claimed in claim 1 or claim 2 wherein the compound of Formula (I) and pectin are in the ratio 1 to about 1 to 1 to about 10 (w/w).

4. A composition as claimed in any one of claims 1 to 3 wherein the composition is a gummy or a powder.

5. A composition as claimed in any one of claims 1 to 4 wherein the composition is a mixture.

6. A composition as claimed in any one of claims 1 to 4 wherein the composition is prepared by spray drying.

7. A composition as claimed in any one of claims 1 to 6 wherein the compound of Formula (I) is in amorphous form or partially in amorphous form.

8. A composition as claimed in any one of claim 6 or claim 7, when dependent on claim 7, wherein the composition is prepared by spray-drying in a solvent selected from: ethanol and water.

9. A composition as claimed in any one of claims 4 to 8 further comprising one or more of the following:
   a). soluble fibre, for example, soluble tapioca fibre;
   b). a low calorie sweetener, for example, allulose; and
   c). citric acid and/or a citrate salt (for example, sodium citrate), for example, citric acid and a salt of citric acid (for example, sodium citrate).

10. A composition as claimed in any one of claims 4 to 8, comprising:
   a). about 5% to about 20% (w/w) of a compound of formula (I); for example, urolithin A; and
   b). about 0.5% to about 4% (w/w) pectin;

   and further comprising one or more of the following

   c). about 25% to about 45% (w/w) soluble fibre, for example, soluble tapioca fibre;
   d). about 25% to about 45% (w/w) of a low calorie sweetener, for example, allulose; and
   e). about 0.5% to about 4% (w/w) citric acid and/or a citrate salt (for example, sodium citrate), for example, citric acid and a salt of citric acid (for example, sodium citrate).

11. A composition as claimed in any one of claims 1 to 10 wherein the compound of Formula (I) is selected from urolithin A, urolithin B, urolithin C or urolithin D, for example, urolithin A

12. A composition as claimed in any one of the preceding claims wherein the compound of formula (I), for example, urolithin A, is present in the range 100mg to 2500mg.

13. A composition as claimed in any one of the preceding claims for use as a medicament, dietary supplement, functional food or medical food.

14. A composition as claimed in any one of the preceding claims for use in the treatment and/or prophylaxis of a muscle-related pathological condition, for example, wherein the muscle-related pathological condition is selected from musculoskeletal diseases or disorders; muscle wasting; myopathies; neuromuscular diseases, such as Duchenne muscular dystrophy and other dystrophies; sarcopenia, for example, acute sarcopenia; muscle atrophy and/or cachexia.

15. A composition as claimed in any one of claims 1 to 12 for use in enhancing muscle performance, improving endurance capacity, or improving, maintaining or reducing the loss of muscle function, for example, wherein the subject suffers age-related decline in muscle function, age-related sarcopenia, age-related muscle wasting, physical fatigue, muscle fatigue, and/or is frail or pre-frail.

16. A composition as claimed in any one of claims 1 to 12 for use in a method of improving physical performance, for example, wherein the improvement in physical performance is in a healthy individual or in the elderly.

17. A composition as claimed in any one of claims 1 to 12 for use in a method of increasing muscle strength, increasing or maintaining muscle mass or improving muscle recovery.

18. A composition as claimed in any one of claims 1 to 12 for use in a method of improving physical endurance.

19. A composition as claimed in any one of claims 1 to 12 for use in a method of inhibiting or retarding physical fatigue, enhancing working capacity and endurance, reducing muscle fatigue, enhancing cardiac and cardiovascular function.

20. A composition as claimed in any one of claims 1 to 12 for use in a method of enhancing sports performance.

21. A composition as claimed in any one of claims 1 to 12 for use in treating disease conditions characterised by inadequate mitochondrial activity.

22. A composition as claimed in any one of claims 1 to 12 for enhancing healthspan.