Claims

1. A synthetic nutritional composition for human consumption comprising a whey protein concentrate from milk, wherein the whey protein concentrate comprises:
a milk fat content of between 6.5 to 10.0wt%, wherein the milk fat contains components of milk fat globule membranes that provide at least 7mg/g of sphingomyelin to the whey protein concentrate; and wherein the majority of the sphingomyelin in the synthetic nutritional composition is provided by the components of the milk fat globule membranes of the whey protein concentrate.

2. The synthetic nutritional composition according to claim 1, wherein the whey protein concentrate comprises a milk fat content of between 8.5 to 10.0wt%.

3. The synthetic nutritional composition according to claim 1 or claim 2, wherein the whey protein concentrate comprises a sphingomyelin content of between 8.0 to 10.7mg/g.

4. The synthetic nutritional composition according to any preceding claim, wherein the nutritional composition comprises between 6.5 to 12.0wt% of the whey protein concentrate on a dry weight basis.

5. The synthetic nutritional composition according to any preceding claim, wherein the components of the milk fat globule membranes of the whey protein concentrate provides at least 65% of the sphingomyelin of the total amount of sphingomyelin in the nutritional composition.

6. The synthetic nutritional composition according to any preceding claim, wherein the nutritional composition comprises at least 0.74mg/g of sphingomyelin on a dry weight basis.

7. The synthetic nutritional composition according to any preceding claim, wherein the whey protein concentrate comprises a total phospholipids content of between 25 to 50 mg/g.

8. The synthetic nutritional composition according to any preceding claim, wherein the whey protein concentrate comprises a ganglioside GD3 in an amount of between 700 to 2000 mg/Kg.

9. The synthetic nutritional composition according to any preceding claim, wherein the whey protein concentrate comprises a ganglioside GM3 in an amount of between 10 to 50 mg/Kg.

10. A method of making a synthetic nutritional composition for human consumption comprising at least 0.7mg/g of sphingomyelin on a dry weight basis; wherein the method comprises the blending of a whey protein concentrate with at least one other component of the

nutritional composition or blending with a substantially complete nutritional composition or blending with an incomplete nutritional composition, wherein said blending is either dry blending or wet blending and wherein the whey protein concentrate comprises: a milk fat content of between 6.5 to 10.0wt%, wherein the milk fat contains components of milk fat globule membranes that provide at least 7mg/g of sphingomyelin to the whey protein concentrate; and wherein the majority of the sphingomyelin in the synthetic nutritional composition is provided by the components of the milk fat globule membranes of the whey protein concentrate.

11. The method of making a synthetic nutritional composition according to claim 10, wherein the method comprises the addition of a sufficient quantity of the whey protein concentrate such that said whey protein concentrate comprises between 6.5 to 12.0wt% of the finished nutritional composition on a dry weight basis.

12. The method of making a synthetic nutritional composition according to claim 10 or claim 11, wherein the whey protein concentrate has a milk fat content of between 7.5 to 10.0wt%.

13. The method of making a synthetic nutritional composition according to any of claims 10 to 12, wherein the whey protein concentrate has a milk fat content of between 9.0 to 10.0wt%.

14. The method of making a synthetic nutritional composition according to any of claims 10 to 13, wherein the nutritional composition is provided with at least 0.74mg/g of sphingomyelin on a dry weight basis.

15. A method of supporting cognitive development in a human subject, comprising the step of administering to the subject a synthetic nutritional composition according to any claims 1 to 9.