WHAT IS CLAIMED IS:

1. A nutritional powder comprising from ~~about~~ 0.1% to ~~about~~ 10% by weight beta-hydroxy-beta-methylbutyrate, from ~~about~~ 0.001% to ~~about~~ 5% by weight of iron, and at least one nutrient selected from fat, protein, or carbohydrate, wherein the fat comprises a long chain polyunsaturated fatty acid in an amount from 0.01% to 5% by weight total fat in the nutritional powder.

2. The nutritional powder of claim 1, further comprising at least one of vitamins and minerals.

~~3. The nutritional powder of claim 1 comprising a fat, wherein the fat comprises from about 0.01% to about 5% by weight of a long chain polyunsaturated fatty acid.~~

34. The nutritional powder of claim 2, wherein the nutritional powder comprises at least one vitamin selected from the group consisting of folic acid, vitamin B12, vitamin C, vitamin D, vitamin E and combinations thereof.

45. The nutritional powder of claim 2 or claim 3, wherein the nutritional powder comprises from ~~about~~ 0.0000001% to ~~about~~ 0.00001% by weight of vitamin D.

56. The nutritional powder of any of claims 2 to 4, wherein the nutritional powder comprises from ~~about~~ 0.000001% to ~~about~~ 0.001% by weight of folic acid.

67. The nutritional powder of any of claims 1 to 5, wherein the nutritional powder comprises casein

78. The nutritional powder of any of claims 1 to 6, comprising a weight ratio of beta-hydroxy-beta-methylbutyrate: iron of from ~~about~~ 150:1 to ~~about~~ 600:1.

89. A packaged composition comprising a metal container and a nutritional product packaged therein, the nutritional product comprising from ~~about~~ 0.1% to ~~about~~ 10% by weight beta-hydroxy-beta-methylbutyrate and at least one nutrient selected from fat, protein, or carbohydrate, wherein the nutritional product is in at least partial contact with a metal surface of the metal container and the metal container comprises at least one metal component selected from a transition metal.

910. The packaged composition of claim 8, wherein the metal container comprises at least 10% metal on an interior surface in contact with the nutritional product.

10~~11~~. The packaged composition of claim 8 or claim 9, wherein the metal container comprises at least 10% metal on an interior surface in contact with the nutritional product and the transition metal is selected from the group consisting of iron, copper, zinc, and manganese.

11~~12~~. The packaged composition of any of claims 8 to 10, wherein the nutritional product further comprises at least one of vitamins and minerals.

12~~13~~. The packaged composition of any of claims 8 to 11, wherein the nutritional product comprises a fat, wherein the fat comprises from ~~about~~ 0.01% to ~~about~~ 5% by weight of a long chain polyunsaturated fatty acid derived from fish oil.

13~~14~~. The packaged composition of any of claims 11 to 12, wherein the nutritional product comprises at least one vitamin selected from the group consisting of folic acid, vitamin B12, vitamin C, vitamin D, vitamin E, and combinations thereof

14~~15~~. The packaged composition of any of claims 11 to 13, wherein the nutritional product comprises from ~~about~~ 0.0000003% to ~~about~~ 0.000003% by weight of vitamin D.

15~~16~~. The packaged composition of any of claims 11 to 14, wherein the nutritional product comprises from ~~about~~ 0.00001% to ~~about~~ 0.0001% by weight of folic acid.