CLAIMS

We claim:

1. A method for providing nutritional management to an individual, comprising the steps of:

(a) determining for the individual a diet cohort based on dietary preferences and/or a demographic factor; and

(b) on the basis of the diet cohort selecting one or more nutritional formulations for the individual, including at least one formulation comprising phytochemicals, omega-6 fatty acids, and antioxidants;

wherein the one or more formulation collectively provide a daily dosage of 1 to 40g of omega-6 fatty acids, 25mg-10g of antioxidants, and one or more phytochemicals comprising one or more polyphenols which provide a daily dosage greater than 5mg of polyphenols;

(c) administering the one or more formulations to the individual.

2. The method according to claim 1, wherein:

- the phytochemicals in addition to comprising a polyphenol also include one or more compounds selected from the group consisting of monophenols, phytosterols, carotenoids, monoterpenes, saponins, lipids, triterpenoids, betalains, organosulfides, indoles, glucosinolates, and sulphur compounds; and/or

- the omega-6 fatty acids comprise one or more fatty acids selected from the group consisting of linoleic (C18:2), conjugated-linoleic (C18:2), gamma-linolenic (C18:3), eicosadienoic (C20:2), di-homo-gamma-linolenic (C20:3), and arachidonic (C20:4), and/or

- the antioxidants are selected from the group consisting of flavonoids, flavones, isoflavones, catechins, anthocyanidins, isothiocyanates, carotenoids, allyl sulfides, polyphenols, terpenes, limonoids, phytosterols, beta carotene, ascorbic acid (vitamin C), folic acid, Se, superoxide dismutase (SOD), catalase, glutathione peroxidase (GSHpx), coenzyme Q10 (CoQ10), glutathione and vitamin E.

3. The method according to claim 1 or 2, wherein the one or more polyphenols is selected from the group consisting of flavonoids, phenolic acids, lignans, stilbenes, punicalagins, hydroxycinnamic acids, and tyrosols.

4. The method according to any one of claims 1 to 3, wherein the phytochemical comprises one or more phytosterols selected from the group consisting of campestrol, sitosterol, gamma sitosterol, and stigmasterol.

5. The method according to any one of claims 1 to 4, wherein the phytochemicals comprise one or more phytosterols and wherein the dosage of the one or more phytosterols is greater than l50mg.

6. The method according to any one of claims 1 to 5, wherein the formulation(s) comprise(s) one or more food items or supplements which comprise phytochemicals, lipids, antioxidants, vitamins, minerals, synbiotics, probiotics, prebiotics, microorganisms, and fiber or combinations thereof; and/or wherein the formulation(s) comprises food items comprising vegetable or vegetable juice packs, fruit or fruit juice packs, dry grain packs, cereal packs, legume, grain, nuts, and/or seeds packs, meat and/or seafood packs, herbs, lipids, meals, snack, side dish, salad, desserts, milks, powder, puree and/or yogurt.

7. A method according to any one of claims 1 to 6, wherein the dietary cohort is selected from the group consisting of predominately meat-based, predominately vegetable-based and predominately seafood-based.

8. The method according to any one of claims 1 to 7, wherein the individual belongs to a diet cohort selected from one or more of the following:

(i) a diet cohort based on primary dietary ingredients of the individual's daily or weekly diet which is determined by comparing levels of one or more of antioxidants, phytochemicals, vitamins, minerals, lipids, carbohydrates, and proteins from foods of the individual's diet with levels in a set of predetermined cohorts;

(ii) a diet cohort based on average daily consumption of one or more of

grains, vegetables, fruits, legumes, dairy, meats, seafood, herbs, sweeteners, and beverages;

(iii) a diet cohort which is predominantly vegetable-based, meat-based or seafood-based; or

(iv) a diet cohort based on gender, age, genetic profile, family history, climactic temperature, or medical condition.

9. The method according to any one of claims 1 to 8, wherein the formulation(s) comprise(s) one or more food items and/or supplements, wherein the one or more formulations, food items, and/or supplements provide one or more of:

(i) sufficient nutrients to supplement the individual diet cohort's diet;

(ii) less than 500 calories or less than 25% of daily calories;

(iii) sufficient fiber to supplement the individual diet cohort's diet;

(iv) sufficient phytochemicals, lipids, antioxidants, vitamins, minerals, synbiotics, probiotics, prebiotics, microorganisms and fiber;

(v) sufficient lipids from natural sources to supplement the individual diet cohort's diet, wherein the natural sources include oils, butters, margarines, nuts, and seeds; or

(vi) sufficient micronutrients to supplement the individual diet cohort's diet.

10. The method according to any one of claims 1 to 9, wherein the formulation(s) comprise(s) one or more food items and/or supplements, wherein the one or more formulations, food items, and/or supplements provides one or more of:

(i) a part or entire daily dietary intake of nutrients for the individual;

(ii) supplement, balance or replace the individual's daily food consumption based on the individual's diet cohort;

(iii) at least 25%, preferably at least 50%, more preferably at least 80% of daily or weekly total caloric intake for the individual; or

(iv) satiety and dietary preference of the individual.

11. A method according to any one of claims 6 to 10, wherein the food items are selected based on the methods of processing employed to prepare the formulation or food item and

wherein optionally the processing is selected from hulling, removing a layer, drying, providing fresh, roasting, and grilling.

12. The method according to any one of claims 1 to 11, wherein the one or more formulations comprise one or more nutrients extracted from foods and then incorporated in the formulation for administration as a liquid, powder, topical cream or patch.

13. The method according to any one of claims 1 to 12, wherein the formulation(s) comprise(s) one or more food items and/or supplements, wherein one or more of the following apply:

(i) the one or more formulations, food items and/or supplements comprise omega-3 fatty acids, wherein the omega-6 fatty acids to omega-3 fatty acids ratio is greater than 1:1, or greater than 5:1, or greater than 10:1;

(ii) the one or more formulations, food items and/or supplements comprise omega-9 fatty acids, wherein the omega-9 fatty acids to omega-6 fatty acids ratio is less than 4:1;

(iii) the one or more formulations, food items and/or supplements comprise monounsaturated and polyunsaturated fatty acids, and the monounsaturated to polyunsaturated fatty acids ratio is less than 4:1;

(iv) the one or more formulations, food items and/or supplements comprise omega-9 fatty acids, and the amount of omega-9 fatty acids is less than 60%, preferably less than 50%, by weight of total lipids;

(v) the amount of omega-6 fatty acids is greater than 20%, preferably greater than 30%, by weight of total lipids;

(vi) the one or more formulations, food items and/or supplements comprise omega-3 fatty acids, and the amount of omega-3 fatty acids is less than 20%, preferably less than 10%, by weight of total lipids;

(vii) the dosage of omega-6 fatty acids is less than 35g, less than 25g, or less than 10g; or

(viii) the one or more formulations, food items and/or supplements comprise omega-3 fatty acids, and dosage of the omega-3 fatty acids is less than 2g, less than 1g, less than 0.5g, or less than 0.2g.

14. The method according to any one of claims 1 to 13, wherein the formulation(s) comprise(s) one or more food items and/or supplements, wherein the one or more formulations, food items and/or supplements comprise:

(i) one or more polyphenols in dosage less than 300mg; and/or

(ii) folate in dosage less than 1000, 400, or 100 mcg; and/or

(iii) one or more phytosterols in dosage less than 1000, 550, or 150 mg; and/or

(iv) one or more carotenoids in dosage less than 14,000, 5,000, or 100 mcg; and/or

(v) betaine and/or choline in dosage less than 600, 200, or 25 mg; and/or

(vi) Se in dosage less than 135, 55, or 10 mcg; and/or

(vii) one or more fibers in dosage less than 50, 20, or 5g; and/or

(viii) Vitamin E-alpha/gamma in dosage less than 0.30%, 0.10%, or 0.01% by weight of total lipids.

15. The method according to any one of claims 1 to 14, comprising a plurality of formulations, food items and/or supplements wherein one formulation, food item and/or supplement provides:

(i) one or more polyphenols in dosage less than 300, 140, or 5 mg, but collectively the formulations provide greater than 5mg of polyphenols; and/or

(ii) antioxidants in dosage less than 10, 2, or 0.25g , but collectively the formulations provide 25mg-10g of antioxidants; and/or

(iii) omega-6 fatty acids in a dosage less than 10, 5, or 2g, but collectively the formulations provide 1-40g of omega-6 fatty acids.

16. The method according to any one of claims 1 to 15, which involves use of a kit comprising the one or more formulations, optionally with packages of food items, wherein one or more of the following apply:

(i) the kit comprises individual portions of food items for daily consumption;

(ii) the kit comprises individual portions of food items for supplementation of daily diet of a individual;

(iii) the kit comprises a label comprising at least one indication of the

suitability of the formulations or packages for a consumer with a specific dietary profile or cohort;

(iv) the kit comprises an indication of the upper limit of average daily consumption of items in the kit; or

(v) a label is attached to the packaging of the kit or formulation.

17. The method according to any one of claims 1 to 15, which involves use of a kit comprising the one or more formulations, food items, and/or supplements, wherein:

(i) the kit comprises formulation(s) which collectively provide an effective amount of nutrients from 0.0001 to 100 g/kg body weight; and/or

(ii) the kit comprises from 2-20 daily formulations, collectively comprising 40-80% of individual's daily calories; and/or

(iii) the kit comprises 10-50% calories from protein, 15-50% calories from lipids, and 35-85% calories from carbohydrates; and/or

(iv) the kit comprises 2-20 daily formulations, which collectively deliver at least 50% of the set of micronutrients for an individual.

18. A method according to any one of claims 1 to 17, wherein a list is prepared for the individual, which provides:

(i) predetermined natural sources of lipids, the sources selected from oils, butters, margarines, nuts and seeds, and optionally one or more of nutrients selected from antioxidants, phytochemicals, vitamins and minerals in amounts that optimizes dietary nutrients such that the individual's lipid intake provides a beneficial effect to the individual; and/or

(ii) a recommended consumption of food items over at least one week; and/or

(iii) food items that should not be included in the individual's daily diet; food items that should be limited in the individual's daily diet; or food items that should be added to the individual's daily diet.

19. Use of the method according to any one of claims 1 to 18, wherein the one or more formulations, food items and/or supplements comprise a medicine for prophylaxis or therapy of a medical condition.

20. Use of the method according to any one of claims 1 to 18, wherein the individual has signs or symptoms of a chronic disease.

21. Use of the method according to any one of claims 1 to 18, in the prophylaxis or treatment of a medical condition or disease.

22. A method of prophylaxis and/or treatment of a medical condition or disease in an individual, comprising administering a method according to any one of claims 1 to 18.

23. A use or method according to any one of the claims 19 to 22, wherein the medical condition or disease is selected from menopause, aging, allergy, musculoskeletal disorders, vascular diseases, hypercholesterolemia, mood swing, reduced cognitive function, cancer, neural disorders, mental disorders, renal diseases, endocrine disorders, thyroid disturbances, weight gain, obesity, diabetes, digestive system disorders, reproductive disorders, infant abnormalities, pulmonary disorders, ophthalmologic disorders, dermatological disorders, sleep disorders, dental diseases, autoimmune diseases, infectious diseases, and inflammatory diseases.

24. The method according to any one of claims 1 to 18, wherein the formulations are effective to aid acid-base balance in an individual.

25. The method according to any one of claims 1 to 18 substantially as hereinbefore described with reference to any one of the figures and/or examples, excluding comparative examples.