FOOD SUPPLEMENT

Summary

In one aspect, the present disclosure refers to a composition comprising at least 50 mg/g of one or several omega-3 type fatty acid(s), at least 10 mg/g of one or several xanthophyll(s), at least 1 mg/g of one or several sterol(s) and at least 2 µg/g of one or several phycoprostane(s).

In another aspect, the present disclosure refers to a food supplement comprising a composition as described herein, and at least one oil selected from medium-chain triglycerides (MCT).

In yet another aspect, the present disclosure refers to a use of a food supplement as described herein, in the manufacture of a medicament for preventing the apparition of age-related cognitive disorders, defined as a non-pathological decrease of the cognitive functions, or cognitive disorders in children or young adults having been subjected to a prenatal stress inducing non-pathological disorders, such as hyperactivity, attention and memory deficit, language retardation and anxious behavior.

In yet another aspect, the present disclosure refers to the food supplement as described herein for use as a therapy.

Detailed Description

The present invention concerns a composition, as well as a food supplement based on fatty acids and xanthophylls and the applications thereof in particular to prevent the apparition of cognitive disorders in humans or animals.

The cognitive processes are defined as all cerebral functions allowing acquiring, processing, memorizing and using data originating from the environment in order to maximize the advantages and minimize the drawbacks of the external constraints. Thus, the cognitive processes are implemented during phases involving reasoning (giving rise to planning, organization, judgment), perception, recognition, language, emotions, memory and learning.

Light cognitive disorders, or cognitive fragilities, are defined as alterations of the cognitive functions without dementia. From a clinical perspective, these disorders are associated to a 0.5 score in the context of an assessment *via* the CDR (Cognitive Drug Research Computerized Assessment System) test.

Amongst these cognitive disorders, a cognitive decline associated with ageing and cognitive alterations induced by a prenatal stress are two phenomena that might intervene throughout the life of an individual.

The age-related cognitive decline is defined as a non-pathological decrease in the cognitive functions such as the speed of information processing, the attentional ability and especially the so-called working (or short-term) memory. These processes result from normal physiological modifications directly related to the age. The age of the start of this decline is still controversial, but given the acceleration of the ageing of the world population, more than 20% of the world population being more than 60 years, and this percentage will be more than 30% in 2050, the age-related cognitive decline is amongst the major issues of these upcoming decades, at global level, and specifically in developed countries, in which it will considerably impact the economy (less autonomy for elderly persons) and public policies.

At the opposite of the age composition pyramid, cognitive disorders may affect infants and young children following a prenatal stress. Indeed, for several years now, the influence of stress during some period of the pregnancy on the cognitive development of the unborn individual has been studied both in humans and in animals. Thus, in animals, mainly in rats, it has been demonstrated that a prenatal stress in the mother would induce a progeny having an altered long-term memory.

It turns out that intense negative stimuli, stress, may induce non-pathological alterations or decreases in the cognitive functions of young children, manifested in an hyperactivity, an attention and memory deficit, language retardation, more difficult

CLAIMS

1. A composition comprising at least 50 mg/g of one or several omega-3 type fatty acid(s), at least 10 mg/g of one or several xanthophyll(s), at least 1 mg/g of one or several sterol(s) and at least 2 µg/g of one or several phycoprostane(s).

2. The composition according to claim 1, characterized in that it comprises 50 to 250 mg/g of one or several omega-3 type fatty acid(s), 10 to 50 mg/g of one or several xanthophyll(s), 1 to 20 mg/g of one or several sterol(s), 2 to 100 µg/g of one or several phycoprostane(s).

3. The composition according to claim 1 or 2, characterized in that it comprises 50 to 200 mg/g of one or several omega-3 type fatty acid(s), 10 to 30 mg/g of one or several xanthophyll(s), 1 to 8 mg/g of one or several sterol(s) and 2 to 50 µg/g of one or several phycoprostane(s).

4. The composition according to any one of claims 1 to 3, characterized in that it comprises 50 to 170 mg/g of one or several omega-3 type fatty acid(s), 10 to 25 mg/g of one or several xanthophyll(s), 1 to 6 mg/g of one or several sterol(s) and 2 to 40 µg/g of one or several phycoprostane(s).

5. A food supplement comprising a composition according to any one of claims 1 to 4, and at least one oil selected from medium-chain triglycerides (MCT).

6. The food supplement according to claim 5, characterized in that the medium-chain triglycerides (MCT) are selected from coconut palm oil and palm oil.

7. The composition according to any one of claims 1 to 4 or the food supplement according to claim 5 or 6, characterized in that the one or at least one of the omega-3 type fatty acids is selected from stearidonic acid (SDA), eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) and mixtures thereof.

8. The composition according to any one of claims 1 to 4 and 7 or the food supplement according to any one of claims 5 to 7, characterized in that the one or at least one of the xanthophylls is fucoxanthin.

9. The composition according to any one of claims 1 to 4, 7 and 8 or the food supplement according to any one of claims 5 to 8, characterized in that the one or at least one of the sterols is selected from phytosterols.

10. The composition according to any one of claims 1 to 4 and 7 to 9 or the food supplement according to any one of claims 5 to 9, characterized in that the one or at least one of the phycoprostanes is selected from phytoprostanes, isoprostanes and neuroprostanes.

11. The composition according to any one of claims 1 to 4 and 7 to 10, or the food supplement according to any one of claims 5 to 10, characterized in that it

further comprises at least one additive selected from preservative agents, colorants, flavors, disintegration agents, lubricant agents, coating or encapsulation agents.

12. The composition according to any one of claims 1 to 4 and 7 to 11, or the food supplement according to any one of claims 5 to 11, characterized in that it is in the form of gel capsules, capsules, tablets, pastilles or loose powder.

13. The composition according to any one of claims 1 to 4 and 7 to 12, or the food supplement according to any one of claims 5 to 12, characterized in that it is packaged in doses having a unit weight comprised between 10 mg and 1 g.

14. Use of a food supplement according to any of claims 5 to 13, in the manufacture of a medicament for preventing the apparition of age-related cognitive disorders, defined as a non-pathological decrease of the cognitive functions, or cognitive disorders in children or young adults having been subjected to a prenatal stress inducing non-pathological disorders, such as hyperactivity, attention and memory deficit, language retardation and anxious behavior.

15. The use according to claim 14, for preventing the apparition of age-related cognitive disorders, defined as a non-pathological decrease of the cognitive functions, characterized in that the daily intake is comprised between 2 to 5 mg of food supplement/kg of body weight.

16. The use according to claim 14, for preventing the apparition of cognitive disorders in children or young adults having been subjected to a prenatal stress inducing non-pathological disorders, such as hyperactivity, attention and memory deficit, language retardation and anxious behavior, characterized in that the daily intake is comprised between 0.05 to 0.1 mg of food supplement /kg of body weight.

17. The food supplement according to any of claims 5 to 13 for use as a therapy.