Oct 15;300(15):1774-83]. Serum levels of vitamin B12 <250 micromol/L are associated with Alzheimer's disease and Parkinson's disease [Moore E, et al Int Psychogeriatr. 2012 Apr;24(4):541-56. Cognitive impairment and vitamin B12].

Vitamin B12 belongs to the class of coumarin compounds, which are characterised by various physiological and pharmacological activities, including anti-inflammatory, anti-bacterial and anti-oxidant activity. It has been demonstrated that vitamin B12 has neuroprotective effects against neuronal cell damage induced by H_2O_2 in undifferentiated SH-SY5Y cells.

The object of the present invention is to provide a combination and a composition alternative to those described in the prior art that is useful in the prevention and/or treatment of oxidative imbalances.

SUMMARY

A first subject of the present disclosure is therefore:

- a combination or a composition for oral use, in particular a nutraceutical, dietetic and nutritional composition comprising extract of Bacopa and vitamin B12.

In one example of the disclosure the combination or composition also comprises lycopene and/or astaxanthin.

In one aspect, there is provided a combination comprising an extract of Bacopa, astaxanthin, lycopene and vitamin B12, wherein said vitamin B12 is present in said composition in a dose between 2.00 and 5.00 microgram.

In another aspect, there is provided a composition for oral use comprising a combination as described herein.

A second subject of the disclosure is:

- use of a combination comprising

a) an extract of Bacopa, preferably of the monnieri species, and

b) vitamin B12 to improve cognitive performance and/or improve mood and/or the state of psychological well-being.

In another aspect, there is provided use of a combination comprising

a) an extract of Bacopa, preferably of Monnieri species;

b) vitamin B12, wherein said vitamin B12 is present in said composition in a dose between 2.00 and 5.00 microgram; and

c) licopene and astaxanthin, or

of a composition disclosed herein, in the manufacture of a medicament for improving cognitive performance and/or improving mood and/or the state of psychological well-being.

Other advantages and features of the present disclosure will become clear from the following detailed description.

DESCRIPTION OF THE DRAWINGS

FIGURE 1: differentiated and undifferentiated SH-SY5Y cells. The top images show phase-contrast microscopy. The bottom images show the immune-

CLAIMS

1. A combination comprising an extract of Bacopa, astaxanthin, lycopene and vitamin B12, wherein said vitamin B12 is present in said composition in a dose between 2.00 and 5.00 microgram.

2. The combination according to claim 1, wherein said extract is obtained from the species *Bacopa Monnieri.*

3. The combination according to claim 1 or 2 wherein said extract of Bacopa is titrated between 10 and 30% in Bacosidi, preferably to 20% by Bacosidi.

4. The combination according to claim 3, wherein said extract of Bacopa is present in said composition in a dose ranging from 100.00 to 300.00 mg, preferably about 200.00 mg.

5. The combination according to any one of claims 1 to 4, wherein said lycopene is an extract of lycopene titrated between 5% and 15%, preferably 10%.

6. The combination according to claim 5 wherein said lycopene is present in said composition in a dose between 5.00 mg and 15.00 mg, preferably 10.00 mg.

7. The combination according to any one of the claims 1 to 6 wherein said astaxanthin is present in said composition in a dose between 2.00 and 6.00 mg, preferably 4.00 mg.

8. A composition for oral use comprising a combination according to any one of the claims 1 to 7.

9. The composition according to claim 8 in the formulation selected between capsule, soft capsule, tablet, pill, jelly, powder, granule, emulsion, solution, syrup.

10. The composition according to claims 8 to 9 wherein said composition is a nutraceutical composition, dietary and nutritional a foodstuff, a beverage, a food supplement, a nutraceutical, a medicament, a food or a medicated food for special medical purposes.

11. Use of a combination comprising
a) an extract of Bacopa, preferably of Monnieri species;
b) vitamin B12, wherein said vitamin B12 is present in said composition in a dose between 2.00 and 5.00 microgram; and
c) licopene and astaxanthin, or
of a composition according to any one of claims 8 to 10, in the manufacture of a medicament for improving cognitive performance and/or improving mood and/or the state of psychological well-being.