CLAIMS

1. A composition for promoting health comprising extract of fermented mung bean; characterized in that the extract is a product of fermentation of mung bean with *Rhizopus* sp.

2. A composition according to Claim 1, characterized in that the *Rhizopus* sp. is *Rhizopus microsporus*.

3. A composition according to Claim 1, characterized in that the fermented mung bean comprises moisture content ranges from 3 to 7%, fat content ranges from 1.5 to 4%, protein content ranges from 27 to 37%, crude fibre content ranges from 1.5 to 3.0%; and carbohydrate content ranges from 45 to 60 %.

4. A composition for promoting health comprising extract of germinated mung bean.

5. A composition according to Claim 4, characterized in that the germinated mung bean further comprises moisture content ranges from 3 to 7%, fat content ranges from 1.5 to 2.5%, protein content ranges from 27 to 33%, crude fibre content ranges from 1.5 to 6.0%; and carbohydrate content ranges from 50 to 60%.

6. A use of a composition as in any one of claims 1 to 5 as an agent for the treatment, co-treatment or prevention of diabetic, immunodeficiency, stress, liver damage and skin pigmentation .

7. A nutraceutical comprising a composition as defined in any of claims 1 to 5 and a nutraceutical acceptable carrier.

8. The nutraceutical as in Claim 7 which is a food product, foodstuff, dietary supplement, nutritional supplement or a supplement composition for a food product or a foodstuff.

9. The composition as in any one of Claims 1 to 5 for use as a medicament.

10. A cosmetic composition comprising a composition as in any one of Claims 1 to 5 and a cosmetically acceptable carrier.

11. The cosmetic composition as in claim 10 which is a skin care preparation.

12. The composition as in any one of Claims 1 to 5, which when consumed by an animal or human, has an effect on the animal or human selected from the group consisting of; as antioxidant, anti-pigmentation, anti-diabetic, immunostimulator of immune cell proliferation and cytotoxic effects on cancerous cells, antistress and liver protective substances.

13. A method for preparing a fermented mung bean extract comprises the steps of:
(a) preparing the mung bean;
(b) inoculating the mung bean with *Rhizopus* sp.;
(c) incubating the mung bean aerobically;
(d) fermenting the mung bean anaerobically for a period of time;
(e) drying and grinding the fermented mung bean to a fine powder; and
(f) extracting the fermented mung bean extract rich in bioactive from the fine powder of step (e).

14. The method for preparing a fermented mung bean extract according to Claim 1, characterised in that in step (b) the *Rhizopus* sp. is *Rhizopus microsporus*.

15. The method for preparing a fermented mung bean extract according to Claim 13 or 14, characterised in that step (f) further comprises the steps of:
(a) dissolving the fine powder of fermented mung bean in a solvent;
(b) separating a layer containing solubles;
(c) freeze drying the layer containing soluble to obtain the fermented mung bean extract rich in bioactive.

16. A method for preparing a fermented mung bean extract according to Claim 13 to 15, characterized in that step (a) is by soaking in distilled water for mung bean hull removal, washing the dehulled mung bean; boiling the dehulled mung bean in water, draining and cooling to room temperature and drying the dehulled mung bean to a moisture content ranging from 45% to 55%.

17. A method for preparing a germinated mung bean extract comprises the steps of:
(a) soaking mung bean in water;
(b) incubating the mung bean anaerobically for a period of time to obtain germinated mung bean,
(c) drying and grinding the germinated mung bean to obtain fine powder of germinated mung bean; and
(d) extracting the germinated mung bean extract rich in bioactive from the fine powder of step (c).

18. The method for preparing a germinated mung bean extract according to Claim 17, characterised in that step (d) further comprises the steps of:
(a) dissolving the fine powder of germinated mung bean in a solvent;
(b) separating a layer containing solubles;
(c) freeze drying the layer containing soluble to obtain the germinated mung bean extract rich in bioactive.

CLAIMS

1. A method for preparing a fermented mung bean extract, the method comprising the steps of:

(a) preparing the mung bean;

(b) inoculating the mung bean with *Rhizopus* sp.;

(c) incubating the mung bean aerobically;

(d) fermenting the mung bean anaerobically for a period of time;

(e) drying and grinding the fermented mung bean to a fine powder; and

(f) extracting the fermented mung bean extract rich in bioactive from the fine powder of step (e).

2. A method according to Claim 1, in which the *Rhizopus* sp. is *Rhizopus microsporus*.

3. A method according to Claim 1 or 2, in which step (f) further comprises the steps of:

(a) dissolving the fine powder of fermented mung bean in a solvent;

(b) separating a layer containing solubles;

(c) freeze drying the layer containing soluble to obtain the fermented mung bean extract rich in bioactive.

4. A method according to any preceding claim, in which step (a) comprises soaking mung beans in distilled water for mung bean hull removal, washing the dehulled mung bean; boiling the dehulled mung bean in water, draining and cooling to room temperature and drying the dehulled mung bean to a moisture content ranging from 45% to 55%.

5. A method for preparing a germinated mung bean extract comprising the steps of:

(a) soaking mung bean in water;

(b) incubating the mung bean anaerobically for a period of time to obtain germinated mung bean,

(c) drying and grinding the germinated mung bean to obtain fine powder of germinated mung bean; and

(d) extracting the germinated mung bean extract rich in bioactive from the fine powder of step (c).

6. A method according to Claim 5, in which step (d) further comprises the steps of:

(a) dissolving the fine powder of germinated mung bean in a solvent;

(b) separating a layer containing solubles;

(c) freeze drying the layer containing soluble to obtain the germinated mung bean extract rich in bioactive.

7. A method according to any preceding claim, in which the fermented mung bean comprises moisture content ranges from 3 to 7%, fat content ranges from 1.5 to 4%, protein content ranges from 27 to 37%, crude fibre content ranges from 1.5 to 3.0%; and carbohydrate content ranges from 45 to 60 %.

8. A mung bean extract produced by a method according to any preceding claim.

9. A mung bean extract according to Claim 8, which comprises antioxidant activity, anti-pigmentation activity, anti-diabetic activity, immune cell proliferation activity, immunostimulatory activity, cytotoxic activity, antistress activity or liver protective activity.

10. A mung bean extract according to Claim 8 or 9 for use as a medicament or in the treatment, co-treatment or prevention of diabetes, immunodeficiency, stress, liver damage or skin pigmentation.

11. A nutraceutical comprising a composition according to Claim 8 or 9 and a nutraceutically acceptable carrier.

12. A nutraceutical according to Claim 11, which is a food product, foodstuff, dietary supplement, nutritional supplement or a supplement composition for a food product or a foodstuff.

13. A cosmetic composition comprising a composition according to Claim 8 or 9 and a cosmetically acceptable carrier.

14. A cosmetic composition according to Claim 13 which is a skin care preparation.