It is therefore necessary to develop alternative meat substitutes to meet current food issues *i.e.* a healthy and safe food product, having a nutritional profile level similar to meat products derived from animals, while having a reduced environmental footprint and avoiding the slaughter of animals.

Summary

The present disclosure arises from the unexpected finding by the inventors that a food product obtained by at least one step of *in vitro* culture of avian stem cells provides high quality proteins.

In one aspect, the present disclosure refers to a food product comprising avian stem cells and at least one food component, wherein the avian stem cells are isolated from embryo and wherein the avian stem cells consist of at least 60% of undifferentiated cells. Accordingly, the present disclosure relates to a food product, in particular a manufactured food product, comprising avian stem cells and at least one food component.

In another aspect, the present disclosure relates to use of avian stem cells isolated from embryo and at least one food component for the manufacture of a food product, wherein the avian stem cells consist of at least 60% of undifferentiated cells.

In another aspect, the present disclosure refers to a method for the preparation of a food product, comprising a step of mixing avian stem cells isolated from embryo with at least one food component, wherein the avian stem cells consist of at least 60% of undifferentiated cells. The present disclosure also relates to a method for the preparation or the manufacture of a food product, comprising a step of mixing avian stem cells with at least one food component.

In another aspect, the present disclosure relates to a food product liable to be obtained, or obtained, by the method as disclosed herein.

Detailed description of the invention

On a preliminary basis, we recall that as intended herein, the term "comprising" has the meaning of "including" or "containing", which means that when an object "comprises" one or several elements, other elements than those mentioned may also be included in the object. In contrast, when an object is said to "consist of" one or several elements, the object is limited to the listed elements and cannot include other elements than those mentioned.

Besides, as is intended herein the expression "cultured meat" will be considered equivalent to the expressions "synthetic meat", "clean meat", "*in vitro* meat" or "cell-based meat".

Obtention of avian stem cells

Preferably, the avian stem cells in the food product according to the invention are avian embryonic stem cells isolated from an embryo. Preferably also, the avian

Claims

1. A food product comprising avian stem cells and at least one food component, wherein the avian stem cells are isolated from embryo and wherein the avian stem cells consist of at least 60% of undifferentiated cells.

2. The food product according to claim 1, wherein the avian stem cells are from duck and/or chicken.

3. The food product according to claim 1 or 2, wherein the avian stem cells have been obtained by a method comprising at least one step of *in vitro* culture, wherein the step of culturing the avian stem cells does not substantially lead to the differentiation of the cells.

4. The food product according to any one of claims 1 to 3, which does not comprise animal component in addition to the avian stem cells.

5. The food product according to any one of claims 1 to 4, wherein the food component is selected from the group consisting of anti-foaming agents, emulsifiers, firming agents, gelling agents, humectants, mineral salts, stabilizers, thickeners, and texturizing agent.

6. The food product according to any one of claims 1 to 5, further comprising at least one supplementary food component selected from the group consisting of vitamins, minerals, fibers, fatty acids, amino acids, flavoring agents, colorants, antioxidants, sweeteners, flavor enhancers, acidifiers, preservatives, sequestrants, seasonings, sugar, prebiotics, salt, water, and antimicrobials.

7. The food product according to any one of claims 1 to 6, in a unit form of at least 15 grams, at least 25 grams, at least 50 grams, at least 70 grams, at least 80 grams, at least 90 grams, at least 100 grams.

8. The food product according to any one of claims 1 to 7, in a form selected from the group consisting of a fresh product, a dried product, a frozen product, a product

which has been cooked, pickled or smoked or in a form incorporated in a processed food product selected from a soup, a stew, a sausage, a spread, a puree, a biscuit, dried granules, tablets, capsules, powder, pasta box, pizzas, ready-to-eat meals, sandwiches or nuggets.

9. The food product according to any one of claims 1 to 8, packed in a commercial packaging suitable for distribution to an end consumer.

10. Use of avian stem cells isolated from embryo and of at least one food component for the manufacture of a food product, wherein the avian stem cells consist of at least 60% of undifferentiated cells.

11. The use according to claim 10, wherein the avian stem cells are as defined in claims 2 to 4.

12. A method for the preparation of a food product, comprising a step of mixing avian stem cells isolated from embryo with at least one food component, wherein the avian stem cells consist of at least 60% of undifferentiated cells.

13. The method according to claim 12, further comprising at least one previous step of culturing the avian stem cells in a culture medium *in vitro* wherein the step of culturing the avian stem cells does not substantially lead to the differentiation of the cells.

14. The method according to claim 12 or 13, comprising:
- at least one step of culturing avian stem cells in a culture medium *in vitro* wherein the step of culturing the avian stem cells does not substantially lead to the differentiation of the cells;
- collecting the avian stem cells;
- mixing the avian stem cells with at least one food additive;
to obtain a food product.

15. The method according to any one of claims 12 to 14, wherein the culture medium does not comprise animal component.

16. The method according to any one of claims 12 to 15, further comprising at least one step of processing the avian stem cells.

17. The method according to any one of clams 12 to 16, wherein the avian stem cells are as defined in claims 2 to 4.

18. A food product liable to be obtained or obtained by the method according to any of claims 12 to 17.