

Claims

1. A method for producing a mammalian milk like product comprising:
- 5 A) Generating lactocytes mammary-like gland organoids derived from mammalian adult breast milk stem cells (mBSCs);
- B) Secreting the mammalian milk like product from such lactocytes from mammalian adult breast milk stem cells (mBSCs).
- 10 2. A method according to claim 1 for producing a non standard human milk like product comprising:
- A) Generating lactocytes mammary-like gland organoids derived from human adult breast milk stem cells (hBSCs);
- B) Secreting the human milk like product from such lactocytes from human adult breast milk stem cells (hBSCs)
- 15 Wherein such non standard human milk like product comprises one or more of the nutrients or bioactives selected from the group consisting of proteins, peptides, lipids, carbohydrates, Vitamins, minerals, choline, myoinositol, L-carnitine, growth factors, cytokines, probiotics, extracellular vesicles, bioactives from exosome and secretory
- 20 IgA.
3. A method according to claim 1 or 2 which optionally comprises a step C) whereby the human milk like product of claim 1 is further treated to obtain a modified human milk like product.
- 25 4. A method according to claim 3 wherein step C) is selected in the group consisting of: a purification step, an isolation process, an extraction process, a

fractionation step, an enrichment process, an enzymatic treatment, the addition of further components and combinations thereof.

5 5. A method for producing a human milk like product according to anyone of claim 2 to 4 wherein culture conditions according to step A) are adapted to generate lactocytes derived from human adult breast milk stem cells (hBSCs) capable to secrete a non-standard human milk like product.

10 6. A method according to anyone of claims 3 to 5 wherein a modified human milk like product is obtained under step C) by adding to the human milk like product of step B) one or more human breast milk components that are not secreted by the lactocytes in step B).

15 7. A method according to anyone of claims 1 to 6 wherein the lactocytes are part of a mammary gland-like organoid structure generated under step A).

20 8. A method according to anyone of claims 1 to 7 wherein the human milk like product consist or comprises bioactives selected from the group consisting of: oligosaccharides, lipids and proteins.

25 9. A method according to anyone of claims 1 to 8 wherein the human milk like product consist or comprises bioactives selected from the group consisting of: lactose, C12:0, C16:0, C18:0, C18:1 n-9, C18:2, lactoferrin and algalactalbumin.

10. A human milk like product which is obtainable according to the method described in anyone of claims 2 to 9.

11. A human milk like product according to claim 10 which comprises or consists of bioactives selected from the group consisting of: oligosaccharides, lipids and proteins.

5 12. A human milk like product according to claim 11 which comprises or consist of bioactives selected from the group consisting of: lactose, C12:0 fatty acid, C16:0 fatty acid, C18:0 fatty acid, C18:1 n-9 fatty acid, C18:2 fatty acid, lactoferrin and alphalactalbumin.

10 13. A human milk like product according to anyone of claims 10 to 12 for use in therapy.

14. Use of a human breast milk like product according to anyone of claims 10 to 12 as a breast feeding substitute.

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