CLAIMS

1. A method for producing a non-human animal-derived cell composition, comprising:

   contacting a single type or a plurality of non-human animal-derived cells with at least one exogenous supplement selected from flavour materials, flavour precursors, flavour enhancers, colours, colour precursors, bioactive compounds or other food-related additives and mixtures thereof.

2. A method according to claim 1, wherein the exogenous supplement is comprised in a carrier, preferably wherein the carrier is a nanocarrier, a nanoparticle, a micelle, a liposome or a vesicle, more preferably wherein the carrier is a nanoparticle, or a particle having a lipid bilayer such as a micelle, a liposome or a vesicle, even more preferably wherein the carriers are liposomes which are preferably composed of phospholipids.

3. The method according to any one of the preceding claims, wherein the non-human animal-derived cells are further contacted with at least one additional exogenous supplement selected from the group consisting of vitamins, minerals (such as exogenous iron and/or a salt thereof), bioactive compounds, bacterial extracts, colours, colour precursors, bioactive compounds, food-related additives and any combination thereof, and wherein the exogenous supplement is comprised in a carrier.

4. The method according to any one of the preceding claims, wherein the cells are contacted with the exogenous supplement comprised in a carrier to obtain a non-human animal-derived cell composition with an improved flavour, aroma, texture, mouthfeel and/or colour.

5. The method according to any one of the preceding claims, wherein the carrier is a liposome with a size polydispersity of below 0.3, preferably below 0.2, more preferably below 0.1; and/or wherein the mean particle size is less than 500nm, preferably less than 350nm, more preferably less than 200nm.

6. The method according to any one of claims 1 to 5, wherein the cells are contacted with the exogenous supplement comprised in a carrier at times of low cell differentiation rate or wherein the cells are contacted with the exogenous supplement comprised in a carrier at times of high cell differentiation rate or wherein the cells are contacted with the exogenous supplement comprised in a carrier at times of low cell division rate or wherein the cells are contacted with the exogenous supplement comprised in a carrier at times of high cell division rate.

7. The method according to any of the preceding claims, wherein the cells are in suspension.

8. The method according to any one of the preceding claims, wherein the non-human animal-derived cells are selected from the group consisting of muscle cells and progenitors thereof; fat cells and progenitors thereof; stromal cells and progenitors thereof; endothelial cells and progenitors thereof; and any combination thereof, preferably wherein the non-human animal is selected from the group consisting of bovine, sheep, swine, poultry, reptile, rodent, wild game, shellfish, fish and insect or any combination thereof.

9. The method according to any one of the preceding claims, wherein the cells are contacted with the at least one exogenous supplement, which is comprised in a carrier, for a time sufficient to create, modify or improve the organoleptic property of the cells, and wherein the cells are contacted with the exogenous supplement comprised in a carrier for at least 5 minutes, at least 10 minutes, at least 20 minutes, at least 30 minutes, at least 40 minutes, at least 50 minutes, at least 1 hour, at least 2 hours, at least 5 hours, at least 10 hours, at least 15 hours, at least 20 hours, at least 1 day, at least 2 days, at least 3 days, at least 5 days or at least one week, preferably for at least 30 minutes and up to 2 days or for at least 1 and up to 24 hours.

10. The method according to any one of the preceding claims, wherein the time of contact is sufficient such that at least 20%, at least 40%, at least 50%, at least 60%, at least 80%, at least 90% of the cells contain an exogenous supplement comprised in a carrier at a site selected from the cell intracellular space, intramembrane space, on the membrane and any combination thereof.

11. The method according to any of the preceding claims, comprising a further step of separation of the non-human cells from the medium and/or comprising the further step of dehydrating the cell composition by freeze-drying, spray drying, oven drying, or absorbing the cell composition onto a solid support.

12. A non-human animal-derived cell composition obtained by a method according to any of the claims 1 to 11.

13. A non-human animal-derived cell composition according to claim 12, wherein the at least one exogenous supplement is selected from the group consisting of flavours materials, flavours, flavour precursors, flavour enhancers, colours, colour precursors, bioactive compounds, or other food-related additives and mixtures thereof,

14. A non-human animal-derived cell composition according to claim 12 or 13, wherein the carrier is a nanocarrier, a nanoparticle, a micelle, a liposome or a vesicle, preferably wherein the carrier is a nanoparticle or a particle having a lipid bilayer like a micelle, a liposome or a vesicle, more preferably wherein the carriers are liposomes which are preferably composed of phospholipids.

15. The non-human animal-derived cell composition according to any of claims 12 to 14, wherein the cells are selected from the group consisting of muscle cells and progenitors thereof; fat cells and progenitors thereof; stromal cells and progenitors thereof; endothelial cells and progenitors thereof; and any combination thereof, preferably wherein the non-human animal is selected from the group consisting of bovine, sheep, swine, poultry, reptile, rodent, wild game, shellfish, fish and insect or any combination thereof.

16. The non-human animal-derived cell composition according to any of claims 12 to 15, wherein the at least one exogenous supplement comprised in a carrier is present in the cells at a site selected from the group consisting of the cell intracellular space, intramembrane space, on the membrane and any combination thereof.

17. The non-human animal-derived cell composition according to any of claims 12 to 16, wherein the plurality of cells contains an amount of the at least one exogenous supplement of about 0.01mg/100g cells to about 100mg/100g cells, preferably contained in an amount of about 0.05mg/100g cells to about 500mg/100g cells, more preferably 0.1mg/100g cells to about 50mg/100g cells, or even more preferably 0.5mg/100g cells to 25mg/100g cells.

18. An enriched cell culture medium comprising at least one exogenous supplement, wherein the supplement is in amount sufficient to confer an organoleptic effect to cells cultivated in the medium, according to the method of claims 1 to 11, and wherein the exogenous supplement is comprised in a carrier, preferably wherein the at least one exogenous supplement is selected from the group consisting of flavour materials, flavour precursors, flavour enhancers, colours, colour precursors, bioactive compounds, or other food-related additives and any combination thereof and/or wherein the carrier is a nanocarrier, a nanoparticle, a micelle, a liposome or a vesicle.

19. An enriched scaffold comprising at least one exogenous supplement, wherein the supplement is in amount sufficient to confer an organoleptic effect to cells cultivated in the presence of the scaffold, according to the method of claims 1 to 11, and wherein the exogenous supplement is comprised in a carrier, preferably wherein

the at least one exogenous supplement selected from the group consisting of flavour materials, flavours, flavour precursors, flavour enhancers, colours, colour precursors, bioactive compounds, or other food-related additives and any combination thereof and/or wherein the carrier is a nanocarrier, a nanoparticle, a micelle, a liposome or a vesicle.