Claims:

Claim 1. A method for producing a meat flavouring comprising;

admixing a population of *in vitro* cultured non-human animal cells with a fat; wherein the admixture consists of from 10^5 animal cells/mL of fat to 10^{10} animal cells/mL of fat and

heating the admixture to a temperature of 60°C to 400°C,

thereby producing the meat flavouring.

Claim 2. A method for modulating the intensity of a meat flavouring comprising;

providing a population of *in vitro* cultured non-human animal cells,

drying the animal cells to reduce the water activity to a predetermined value,

admixing the population of dried non-human animal cells with a fat; wherein the admixture consists of from 10^5 animal cells/mL of fat to 10^{10} animal cells/mL of fat and

heating the admixture to a temperature of 60°C to 400°C to produce a meat flavouring, wherein the predetermined value of the water activity determines the intensity of the meat flavouring.

Claim 3. A method according to any one of the preceding claims wherein the admixture is heated to 145°C.

Claim 4. A method according to any one of the preceding claims wherein the admixture is heated for 1 second to 7 days.

Claim 5. A method according to claim 4 wherein the admixture is heated for 10 mins.

Claim 6. A method according to any one of the preceding claims wherein the fat is an edible fat.

Claim 7. A method according to claim 6 wherein the fat is a plant butter or margarine.

Claim 8. A method according to any one of claims 1 to 6 wherein the fat is an oil.

Claim 9. A method according to claim 8 wherein the fat is a plant oil.

Claim 10. A method according to claim 9 wherein the plant oil is an algal oil, a fungal oil, corn oil, olive oil, soy oil, peanut oil, walnut oil, almond oil, sesame oil, cottonseed oil, rapeseed oil, canola oil, safflower oil, sunflower oil, flax seed oil, palm oil, palm kernel oil, coconut oil, babassu oil, wheat germ oil, borage oil, black currant oil, sea-buckhorn oil, macadamia oil, saw palmetto oil, conjugated linoleic oil, arachidonic acid enriched oil, docosahexaenoic acid (DHA) enriched oil, eicosapentaenoic acid (EPA) enriched oil, palm stearic acid, sea-buckhorn berry oil, macadamia oil, saw palmetto oil, or rice bran oil; or other hydrogenated fats.

Claim 11. A method according to claim 10 wherein the plant oil is coconut oil or peanut oil.

Claim 12. A method according to any one of the preceding claims wherein the fat is low in polyphenol.

Claim 13. A method according to claim 12 wherein the total phenolic content of the fat is less then 50mg gallic acid equivalents (GAE) per 100g of fat.

Claim 14. A method for producing a meat flavouring comprising;

admixing a population of *in vitro* cultured non-human animal cells with coconut oil or peanut oil ; wherein the admixture consists of from 10^5 animal cells/mL of fat to 10^{10} animal cells/mL of fat; and

heating the admixture to a temperature of 60°C to 400°C,

thereby producing the meat flavouring.

Claim 15. A method according to any one of the preceding claims wherein the population comprises 10^5 or more cells.

Claim 16. A method according to any one of the preceding claims wherein the animal cells are undifferentiated cells.

Claim 17. A method according to any one of claims 1 to 15 wherein the animal cells are differentiated cells.

Claim 18. A method according to claim 17 wherein the animal cells are skeletal and cardiac myoblasts, myocytes, myotubes, fibroblasts, osteoclasts, osteoblasts, osteocytes, chondrocytes, erythrocytes, leukocytes, thrombocytes, macrophages, adipocytes, neurons, epithelial cells, keratinocytes, melanocytes, vascular and intestinal endothelial cells, hepatocytes, gland cells or kidney cells.

Claim 19. A method according to any one of the preceding claims wherein the animal cells are from a meat species.

Claim 20. A method according to claim 19 wherein the animal cells are from a livestock, poultry or aquatic species.

Claim 21. A method according to any one of claims 19 to 20 wherein the meat flavouring confers a flavour and/or aroma characteristic of the meat species.

Claim 22. A method according to any one of the preceding claims wherein method comprises providing a population of dried *in vitro* cultured non-human animal cells.

Claim 23. A method according to claim 22 wherein the population of dried *in vitro* cultured non-human animal cells is provided by a method comprising;

culturing animal cells *in vitro* to produce a population of *in vitro* cultured animal cells and drying said population.

Claim 24. A method according to any one of the preceding claims wherein the non-human animal cells are dried to a predetermined value of water activity (a_w).

Claim 25. A method according to claim 24 wherein the predetermined value of water activity is 0.9 or lower.

Claim 26. A method according to any one of the preceding claims wherein the non-human animal cells are freeze-dried.

Claim 27. A meat flavouring produced by a method consisting of admixing a population of *in vitro* cultured non-human animal cells with a fat; wherein the admixture consists of from 10^5 animal cells/mL of fat to 10^{10} animal cells/mL of fat and heating the admixture to a temperature of 60°C to 400°C, thereby producing the meat flavouring.

Claim 28. A meat flavouring according to claim 27 wherein the flavouring is a meat-flavoured oil.

Claim 29. A method for producing meat flavoured foodstuff comprising;

admixing a meat flavouring according to claim 27 or 28 with one or more food ingredients, thereby producing the meat flavoured foodstuff.

Claim 30. A method according to claim 29 wherein the one or more food ingredients are from plants.

Claim 31. A method according to claim 29 or 30 wherein the foodstuff is a meat substitute product.

Claim 32. Use of a meat flavouring according to claim 27 or 28 in the production of a meat flavoured foodstuff.

Claim 33. A foodstuff comprising a meat flavouring according to claim 27 or 28 and one or more food ingredients.

Claim 34. A foodstuff according to claim 33 wherein the foodstuff is a meat substitute product.

Claim 35. A foodstuff according to claim 33 or claim 34 wherein the one or more food ingredients are from plants.