CLAIMS

1. A slaughter-free meat product for dietary consumption exhibiting an extended shelf life, wherein the shelf life is extended for greater than 14 days following harvest compared to conventional meat obtained by slaughter;

wherein the slaughter-free meat product comprises the following fatty acid classes in the amounts indicated, expressed as % of that class over total fatty acids:

saturated fatty acids content between 10% to 30%;

monounsaturated fatty acids content between 40% to 60%; and

polyunsaturated fatty acids content between 1% to 10%;

wherein the slaughter-free meat product has a ratio of 2:1 to 18:1 of the omega 6:3 fatty acids classes;

wherein the slaughter-free meat product is substantially free of serum and other animal components;

and wherein the extended shelf life of the slaughter-free meat is due at least in part to the lower total fatty acid content which reduces fatty acid oxidation and to being substantially free of serum and other animal components.

2. The slaughter-free meat product of claim l, wherein the slaughter-free meat product exhibits an extended shelf life at 4°C.

3. The slaughter-free meat product of claim l, wherein the slaughter-free meat product exhibits an extended shelf life at 23°C.

4. The slaughter-free meat product of claim l, wherein the shelf life is determined by measuring the total microbial count (TC), E. coli/coliforms count (EC), E. coli microbial count, or the coliforms count.

5. The slaughter-free meat product of claim l, wherein the shelf life threshold is no more than 1 cfus microbial contamination per g/wet mass.

6. The slaughter-free meat product of claim l, wherein the shelf life is determined after harvest, and prior to formulation.

7. The slaughter-free meat product of claim 4, wherein the TC measurement of conventional meat obtained by slaughter is at least 1.5x higher than that of the TC measurement of slaughter-free meat product.

8. The slaughter-free meat product of claim l, wherein the slaughter-free meat product comprises no more than l µg steroid hormone.

9. The slaughter-free meat product of claim l, wherein the slaughter-free meat product comprises 50g to 90 g by weight of amino acids per 100 g dry mass.

10. The slaughter-free meat product of claim l, wherein the slaughter-free meat product has a moisture content of 65% to 95%, wherein the moisture content is measured after harvest, but before formulation.

11. The slaughter-free meat product of claim l, wherein the slaughter-free meat product comprises slaughter-free chicken, duck, or bovine meat, and the conventional meat comprises chicken, duck or bovine meat obtained by slaughter.

12. The slaughter-free meat product of claim l, wherein the slaughter-free meat product is substantially free of vasculature.

13. The slaughter-free meat product of claim l, wherein the conventional meat is not processed.

14. A method of producing a slaughter-free meat product exhibiting an increase in shelf life compared to unprocessed conventional meat obtained by slaughter, the method comprising:

a) providing cells from a non-human organism;

b) culturing the cells in media under suspension culture conditions or adherent culture conditions, wherein the media is substantially free of serum and other components derived from an animal; and

c) isolating the cells and producing the slaughter-free meat product,

wherein the resulting slaughter-free meat product has a ratio of 2:1 to 18:1 of the omega 6:3 fatty acids classes,

thereby producing a slaughter-free meat product exhibiting an increase in shelf life compared to unprocessed conventional meat obtained by slaughter.

15. The method of claim 14, wherein the cells further comprise adipocytes, endothelial cells, cells of a mesoderm lineage, and combinations thereof.

16. The method of claim 14, wherein the cells comprise at least fibroblasts and myoblasts, and the fibroblasts and myoblasts are provided at a ratio of 95F:5M to 5F:95M.

17. The method of claim 14, wherein the cells are derived from chicken cells, duck cells, or bovine cells.

18. The method of claim 14, further comprising adjusting the fatty acid content of the media.

19. The method of claim 18, wherein adjusting the fatty acid content of the media comprises introducing into the media an agonist.

20. The method of claim 14, wherein the slaughter-free meat product comprises the following fatty acid classes in the amounts indicated, expressed as % of that class over total fatty acids:

saturated fatty acids content between 10% to 30%;

monounsaturated fatty acids content between 40% to 60%; and

polyunsaturated fatty acids content between 1% to 10%.

21. The method of claim 14, wherein the slaughter-free meat is substantially free of serum and other animal components.

22. The method of claim 14, wherein the extended shelf life of the slaughter-free meat is due at least in part to the lower total fatty acid content which reduces fatty acid oxidation and to being substantially free of serum and other animal components.