Claims

1. A cell culture medium supplement comprising a water-soluble fraction of a plant protein isolate, wherein the water soluble fraction comprises two or more of a plant albumin, a plant globulin, a plant catalase, a plant superoxide dismutase, a plant transferrin, a plant fibronectin, a plant vitronectin, a plant insulin, a plant leghemoglobin, a plant aldolase, a plant lipase, a plant transaminase, a plant aminotransferase, a plant cystatin, or a combination thereof, wherein said supplement is devoid of any serum proteins.

2. The cell culture medium supplement of claim 1, wherein said supplement is essentially devoid of any animal serum-derived component.

3. The cell culture medium supplement of claim 1 or claim 2, wherein said plant albumin is a chickpea albumin, a hempseed albumin, a lentil albumin, a pea albumin, a soy albumin, a wheat albumin, a potato albumin, a corn albumin, a sunflower albumin, a Brazil nut albumin, or a sesame albumin.

4. The cell culture medium supplement of any one of claims 1 to 3, wherein said plant albumin is present in the cell culture medium supplement at a concentration such that when the cell culture medium supplement is added to a cell culture medium the plant albumin has a final concentration of 0.01% to 10% by weight in the cell culture medium.

5. The cell culture medium supplement of any one of claims 1 to 4, wherein said plant catalase is an *Arabidopsis* catalase, a cabbage catalase, a cucumber catalase, a cotton catalase, a potato catalase, a pumpkin catalase, a spinach catalase, a sunflower catalase, a tobacco catalase, a tomato catalase, a kidney bean catalase, a mung bean catalase, or a wheat catalase.

6. The cell culture medium supplement of any one of claims 1 to 5, wherein said plant catalase is present in the cell culture medium supplement at a concentration such that when the cell culture medium supplement is added to a cell culture medium the plant catalase has a final concentration of 1 ng/ml to 100 ng/ml in the cell culture medium.

7. The cell culture medium supplement of any one of claims 1 to 6, wherein said plant fibronectin is a bean fibronectin, a chickpea fibronectin, a lentil fibronectin, a rice fibronectin, a soy fibronectin, a tobacco fibronectin or a wheat fibronectin.

8. The cell culture medium supplement of any one of claims 1 to 7, wherein said plant fibronectin is present in the cell culture medium supplement at a concentration such that when the cell culture medium supplement is added to a cell culture medium the plant fibronectin has a final concentration of 0.1 µg/ml to 100 µg/ml in the cell culture medium.

9. The cell culture medium supplement of any one of claims 1 to 8, wherein said plant insulin is glucokinin, charantin, or corosolic acid.

10. The cell culture medium supplement of any one of claims 1 to 9, wherein said plant insulin is present in the cell culture medium supplement at a concentration such that when the cell culture medium supplement is added to a cell culture medium the plant insulin has a final concentration of 0.05 µg/ml to 10 µg/ml in the cell culture medium.

11. A cell culture medium comprising a serum-free medium and the cell culture medium supplement according to any one of claims 1 to 10, wherein said serum-free medium is essentially devoid of any animal serum-derived components.

12. A method of producing cultured meat, comprising culturing cells in the cell culture medium of claim 11, and producing meat from the cultured cells.

13. The method of claim 12, wherein said cells are from edible animals, wherein the edible animal is livestock, game, poultry, fish, or crustacean.

14. The method of claim 12 or claim 13, wherein said cells are fibroblasts.

15. The method of claim 14, wherein said fibroblasts are bovine fibroblasts or chicken fibroblasts.

16. Cultured meat produced by the method of any one of claims 12 to 15.

17. The cell culture medium supplement of claim 1, wherein the water-soluble fraction of a plant protein isolate is from at least one plant selected from soybean, chickpea, hempseed, pea, potato, lentil, wheat, brown rice, corn, or any combination.