CLAIMS

1. A method for producing an edible composition, the method comprising the steps of:

    a. incubating an edible three-dimensional porous scaffold and a plurality of non-human animal cell types comprising: (i) myoblasts or progenitor cells thereof; and at least one of: (ii) at least one type of extracellular matrix (ECM) secreting cell; or (iii) at least one type of extracellular matrix (ECM) secreting cell and endothelial cells or progenitor cells thereof, wherein said myoblasts or progenitor cells thereof and said endothelial cells or progenitor cells thereof are incubated at a ratio ranging between 10:1 to 1:10; and

    b. inducing differentiation of myoblasts or progenitor cells thereof into myotubes,

    thereby producing the edible composition.

2. The method of claim 1, wherein said plurality of cell types comprises myoblasts or progenitor cells thereof, at least one type of extracellular matrix (ECM) secreting cell, and endothelial cells or progenitor cells thereof.

3. The method of any one of claims 1 or 2, wherein said ECM secreting cell is selected from the group consisting of: stromal cells, fibroblasts, pericytes, smooth muscle cells and progenitor cells thereof.

4. The method of any one of claims 1 to 3, wherein said plurality of cell types comprises myoblasts, ECM-secreting cells and endothelial cells.

5. The method of any one of claims 1 to 4, wherein said a progenitor cell of a myoblast is a satellite cell.

6. The method of any one of claims 1 to 5, wherein said endothelial cells are selected from skeletal microvascular endothelial cells, aortic smooth muscle cells, or a combination thereof.

7. The method of any one of claims 1 to 6, wherein said plurality of cell types comprises satellite cells, ECM-secreting cells, and endothelial cells.

~~8. The method of claim 7, wherein said myoblasts or progenitor cells thereof and ECM-secreting cells are incubated at a ratio ranging between 10:1 to 1:1.~~

~~9. The method of claim 7, wherein said ECM-secreting cells and endothelial cells are incubated at a ratio ranging between 1:10 to 1:1.~~

~~10. The method of any one of claims 7 to 9, wherein said satellite cells, said ECM-secreting cells, and said endothelial cells are incubated at a ratio ranging between 10:1:1 to 2:1:10.~~

~~11. The method of any one of claims 7 to 10, wherein said ECM-secreting cell is a fibroblast, a progenitor cell thereof, or a combination thereof.~~

~~12. The method of claim 1, wherein said three-dimensional porous scaffold is selected from the group consisting of: a textured protein, a non-textured protein, and a polysaccharide.~~

~~13. The method of claim 12, wherein said textured protein is textured soy protein.~~

~~14. The method of any one of claims 12 or 13, wherein said three-dimensional porous scaffold comprises pores with an average diameter ranging from 20 to 1,000 micrometers.~~

~~15. The method of any one of claims 1 to 14, wherein said plurality of cells are derived from a livestock mammal.~~

~~16. The method of any one of claims 1 to 15, wherein said myoblasts or progenitor cells thereof and said three-dimensional porous scaffold are incubated at a ratio ranging from 10^3 to 10^7 of said myoblasts or progenitor cells thereof to 10 mg of said three-dimensional porous scaffold.~~

~~17. The method of any one of claims 1 to 16, wherein said three-dimensional porous scaffold further comprises an extracellular matrix.~~

~~18.~~1. An edible composition comprising:

a. an edible three-dimensional porous scaffold;

b. Non-human-animal myotubes comprising 10,000-250,000 myotube nuclei per mm^3 of said three-dimensional porous scaffold; and

c. a plurality of non-human-animal cell types selected from the group consisting of: (i) myoblasts or progenitor cells thereof; and at least one of: (ii) at least one type of ECM-secreting cell; or (iii) at least one type of ECM-secreting cell and endothelial cells or progenitor cells thereof, wherein said endothelial cells or progenitor cells thereof comprise less than 15% of said plurality of cells.

~~19.~~2. The composition of claim ~~18~~1, wherein said plurality of cell types comprises myoblasts or progenitor cells thereof, at least one type of extracellular matrix (ECM)-secreting cells, and endothelial cells or progenitor cells thereof.

~~20.~~3. The composition of claim ~~18 –~~1 or ~~19~~2, wherein said a progenitor cell of a myoblast is a satellite cell.

~~21.~~4. The composition of any one of claims ~~18 –~~1 to ~~20~~3, wherein said plurality of cell types comprises satellite cells, ECM-secreting cells, and endothelial cells.

~~22.~~5. The composition of any one of claims ~~18 –~~1 to ~~21~~4, wherein said ECM-secreting cell is a fibroblast, a progenitor cell thereof, or a combination thereof.

~~23.~~6. The composition of any one of claims ~~18 –~~1 to ~~22~~5, wherein said three-dimensional porous scaffold is selected from the group consisting of: a textured protein, a non-textured protein, and a polysaccharide.

~~24.~~7. The composition of claim ~~23~~6, wherein said textured protein is textured soy protein.

~~25.~~8. The composition of any one of claims ~~18 –~~1 or ~~24~~7, wherein said three dimensional porous scaffold comprises pores with an average diameter ranging from 20 to 1,000 micrometers.

~~26.~~9. The composition of any one of claims ~~18 –~~1 to ~~25~~8, wherein said plurality of cells are derived from a livestock mammal.

~~27.~~10. The composition of any one of claims ~~18 –~~1 to ~~26~~9, wherein said three-dimensional porous scaffold further comprises an extracellular matrix.