WHAT IS CLAIMED IS:

1. A method of producing a microtissue comprising one or more cell types, the method comprising:

(a) forming in suspension, without matrix adherence, aggregates comprising non-human pluripotent stem cells, said non-human pluripotent stem cells of said aggregates exhibiting a doubling time of 10-20 hours in an undifferentiated manner for more than 60 passages, capable of differentiating into muscle, fat and connective tissue upon differentiation induction, growing in the presence of growth factors, exhibiting cell to cell adhesion lower than that of embryoid bodies (EBs) as determined by reduced expression of adhesion molecules selected from the group consisting of COL6A2, CD44, COL6A1, ANXA1, ANXA2 and S100A11 as compared to said EBs; and

(b) transferring the aggregates to a bioreactor for growth in suspension without matrix adherence in the absence of growth factors to thereby produce the microtissue.

2. A method of producing a microtissue comprising one or more cell types, the method comprising:

(a) providing a suspension culture which comprises aggregates comprising non-human pluripotent stem cells, said non-human pluripotent stem cells of said aggregates exhibiting a doubling time of 10-20 hours in an undifferentiated manner for more than 60 passages, capable of differentiating into muscle, fat and connective tissue upon differentiation induction, growing in the presence of growth factors, exhibiting cell to cell adhesion lower than that of embryoid bodies (EBs) as determined by reduced expression of adhesion molecules selected from the group consisting of COL6A2, CD44, COL6A1, ANXA1, ANXA2 and S100A11 as compared to said EBs; and

(b) transferring the aggregates to a bioreactor for growth in suspension without matrix adherence in the absence of growth factors to thereby produce the microtissue.

3. A method of producing a microtissue comprising one or more cell types of interest, the method comprising:

(a) producing the microtissue according to any one of claims 1-2; and

(b) subjecting said microtissue to differentiation conditions in suspension to thereby produce the microtissue comprising one or more cell types of interest.

4. The method of any one of claims 1-3, wherein numerical values indicated are provided under optimal conditions for cell growth of a type and developmental stage as said non-human pluripotent stem cells.

5. The method of any one of claims 1-4, wherein said non-human pluripotent stem cells are selected from the group of avian pluripotent stem cells, bovine pluripotent stem cells, porcine pluripotent stem cells, goat pluripotent stem cells, sheep pluripotent stem cells, shrimp pluripotent stem cells and fish pluripotent stem cells.

6. The method of any one of claims 1-5, wherein said microtissue is 30-500 μm in diameter.

7. The method of any one of claims 1-5, wherein said non-human pluripotent stem cells of said aggregates exhibit alkaline phosphatase expression, exhibit telomerase gene expression and/or are *SSEA4-, LIN28+*, *ENS-1+, NANOG+*, *OCT4*,+and *TRA-I-60+*.

8. The method of any one of claims 3-7, wherein said subjecting said microtissue to differentiation conditions comprises priming said microtissues in the presence of fatty acids at a concentration not exceeding 100 μM for a time sufficient to obtain muscle cells and stem cells having an adipocyte fate while retaining a proliferative phenotype, optionally followed by differentiating in the presence of fatty acids at a concentration of 100 uM or above.

9. The method of any one of claims 1-8, wherein said one or more cell types are selected from the group consisting of a muscle cell, a fat cell and a connective tissue cell.

10. The method of claim 9, wherein said one or more cell types comprise a fat cell and a muscle cell.

11. The method of any one of claims 1-10, wherein each step of the method is devoid of animal components other than said non-human pluripotent stem cells.

12. The method of any one of claims 1-11, wherein said microtissue is *NANOG- OCT4- LIN28-*, *SSEA3+*.

13. The method of any one of claims 1-12, wherein said doubling time is of no more than 12 hours.

14. A microtissue obtainable according to the method of any one of claims 1-13.

15. A microtissue comprising one or more cell types, said microtissue being 30-500 μm in diameter, wherein cells of said microtissue are *NANOG-OCT4- LIN28-*, *SSEA3+*, and wherein optionally said one or more cell types comprise a fat cell and a muscle cell.

16. A food comprising the microtissue of claims 14 or 15.