CLAIMS

1. A cell preparation for use in the treatment of osteoarthritis, comprising:

a mixture including micronized fat cell and an adipose stem cell, the micronized fat cell and the adipose stem cell being obtained by steps of:

separating an adipose tissue taken from a subject into a cellular fraction and a liquid fraction to obtain the cellular fraction;

removing impurities from the cellular fraction to obtain a concentrate of a fat cell and an adipose stem cell; and

micronizing the fat cell in the concentrate of the fat cell and the adipose stem cell, wherein there are more than 100,000 adipose stem cells per 1mL of the cell preparation.

2. The cell preparation as in claim 1, wherein the cell preparation has 1 to 10 adipose stem cells per one fat cell.

3. The cell preparation as in claim 1, wherein there are 150,000-200,000 adipose stem cells per 1mL of the cell preparation.

4. The cell preparation as in claim 1, wherein the fat cell is micronized to have a size sufficient to pass through a needle having a gauge of 18-30.

5. Use of a cell preparation comprising a mixture including micronized fat cell and an adipose stem cell, in the manufacture of a therapeutic agent for the treatment of pain caused by osteoarthritis, wherein there are more than 100,000 adipose stem cells per 1mL of the cell preparation, and wherein the cell preparation is to be injected to a site of an affected part of a patient.

6. The use as in claim 5, wherein the cell preparation has 1 to 10 adipose stem cells per one fat cell.

7. The use as in claim 5, wherein there are 150,000-200,000 adipose stem cells per 1mL of the cell preparation.

8. The use as in claim 5, wherein the fat cell has a size sufficient to pass through a needle having a gauge of 18-30.

9. The use as in claim 5, wherein the therapeutic agent is to be administered to the patient having osteoarthritis of the interosseous joint.

10. A method for manufacturing a cell preparation for use in the treatment of osteoarthritis, comprising steps of:

separating an adipose tissue taken from a subject into a cellular fraction and a liquid fraction to obtain the cellular fraction;

removing impurities from the cellular fraction to obtain a concentrate of a fat cell and an adipose stem cell;

micronizing the fat cell in the concentrate of the fat cell and the adipose stem cell to obtain a mixture including the micronized fat cell and the adipose stem cell;

separating the adipose stem cell from the mixture including the micronized fat cell and the adipose stem cell to obtain the adipose stem cell; and

mixing the separated adipose stem cell with remainder of the concentrate of the fat cell and the adipose stem cell to obtain the mixture including the fat cell and the adipose stem cell,

wherein the cell preparation comprises a mixture including a fat cell and an adipose stem cell in a high concentration, wherein there are more than 100,000 adipose stem cells per 1mL of the cell preparation.

11. A cell preparation for use in repairing muscle, comprising:

a mixture including a micronized fat cell and an adipose stem cell, the micronized fat cell and the adipose stem cell being obtained by steps of:

separating an adipose tissue taken from a subject into a cellular fraction and a liquid fraction to obtain the cellular fraction;

removing impurities from the cellular fraction to obtain a concentrate of a fat cell and an adipose stem cell; and

micronizing the fat cell in the concentrate of the fat cell and the adipose stem cell, wherein there are more than 100,000 adipose stem cells per 1mL of the cell preparation.