Claims:

What is claimed is

1. A method of preparing a mesenchymal stem cell storing or transport formulation, wherein the mesenchymal stem cells are mesenchymal stem cells of the amniotic membrane of umbilical cord, wherein the formulation comprises 0.5 to 10 million mesenchymal stem cells, the method comprising

a) suspending mesenchymal stem cells in a pre-defined volume of a crystalloid solution, wherein the crystalloid solution is PlasmaLyte and comprises 0.5 % to about 3 % (w/v) serum albumin, thereby obtaining a first cell suspension,

b) determining the concentration of the mesenchymal stem cells in the first cell suspension, and determining the volume of the first cell suspension needed to prepare a formulation comprising 0.5 to 10 million mesenchymal stem cells,

c) mixing the determined volume of the first cell suspension with a volume of a liquid carrier, wherein after mixing the mesenchymal stem cell storing or transport formulation comprises not more than 20% PlasmaLyte, wherein said liquid carrier comprises 0.5% to 3 % (w/v) serum albumin, and as well as

i) Trolox;

ii) Na^+;

iii) K^+;

iv) Ca^{2+},

v) Mg^{2+}

vi) Cl^-;

vii) $H_2PO_4^-$;

viii) HEPES;

ix) Lactobionate;

x) Sucrose;

xi) Mannitol;

xii) Glucose;

xiii) Dextran-40;

xiv) Adenosine¸ and

xv) Glutathione,

thereby obtaining the mesenchymal stem cell storing or transport formulation comprising 0.5 to 10 million mesenchymal stem cells.

2. The method of claim 1, wherein the pre-defined volume of the crystalloid solution used for suspending the mesenchymal stem cells is 1 ml to 10 ml.

3. The method of claim 1 or 2, wherein, after mixing the determined volume of the first cell suspension with the volume of the liquid carrier, the total volume of the mesenchymal stem cell storing or transport formulation is 1 ml.

4. The method of claim 2, wherein the formulation comprises 0.5 to 10 million viable mesenchymal stem cells.

5. The method of any of claims 1 to 4, wherein the formulation comprises 1, 3 or 5 million mesenchymal stem cells.

6. The method of any of the foregoing claims, wherein the mesenchymal stem cells have been harvested from a cell culture vessel prior to resuspending the mesenchymal stem cells in the pre-defined volume of the crystalloid solution.

7. The method of any of the foregoing claims, wherein both the crystalloid solution and the liquid carrier comprise the same concentration of serum albumin.

8. The method of claim 7, wherein both the crystalloid solution and the liquid carrier comprise 1% to 3% (w/v) serum albumin.

9. The method of any one of the claims 7 or 8, wherein both the crystalloid solution and the liquid carrier comprise 1% (w/v) serum albumin.

10. The method of any the forgoing claims, wherein the serum albumin is human serum albumin.

11. The method of any of the foregoing claims, wherein the mesenchymal stem cells of the amniotic membrane of the umbilical cord are a mesenchymal stem cell population, wherein at least 90 % or more cells of the mesenchymal stem cell population express each of the following markers: CD73, CD90 and CD105.

12. The method of claim 11, wherein at least 90 % or more cells of the mesenchymal stem cell population lack expression of the following markers: CD34, CD45 and HLA-DR.

13. The method of claim 11 or 12, wherein at least 91 % or more, 92 % or more, 93 % or more, 94 % or more, 95 % or more, 96 % or more, 97 % or more, 98 % or more, 99 % or more cells of the mesenchymal stem cell population express each of CD73, CD90 and CD105 and lack expression of each of CD34, CD45 and HLA- DR (Human Leukocyte Antigen – antigen D Related).

14. A mesenchymal stem cell storing or transport formulation obtained by a method as defined in any of claims 1 to 13.

15. A mesenchymal stem cell storing or transport formulation obtainable by a method as defined in any of claims 1 to 13.

16. A method of transporting mesenchymal stem cells, the method comprising transporting said mesenchymal stem cells in a mesenchymal stem cell storing or transport formulation as defined in claim 14 or 15.

17. The method of claim 16, wherein the transporting is performed for 7 days or less.

18. The method of any one of claims 16 to 17, wherein the transporting is performed at a temperature of -5°C to 15°C.

19. The use of a mesenchymal stem cell storing or transport formulation as defined in claim 14 or 15 for the manufacture of the pharmaceutical composition for treating a subject having a disease, wherein the disease is a skin disease or a wound, and the use comprising topically administering mesenchymal stem cells that have been stored or transported in a mesenchymal stem cell storing or transport formulation as defined in claim 14 or 15, the use comprising separating the mesenchymal stem cells from the mesenchymal stem cell storing or transport formulation and administering the mesenchymal stem cells to the subject.

20. The use of claim 19, wherein separating the mesenchymal stem cells from the mesenchymal stem cell storing or transport formulation comprises centrifugation.