CLAIMS

1. Use of a composition comprising a population of isolated human umbilical cord-derived cells in the manufacture of a medicament for reducing amyloid plaque formation or diminishing amyloid plaques in a patient, wherein the isolated human umbilical cord-derived cells are obtained from human umbilical cord tissue substantially free of blood, wherein the isolated cells self-renew and expand in culture and do not express CD117.

2. The use of claim 1, said composition further comprising pharmaceutically acceptable carriers and/or diluents selected from the group consisting of: saline, aqueous buffer solutions, hydrogels, biomatrices, scaffolds, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

3. The use of claim 1, wherein said composition is formulated to enhance neural cell survival, differentiation or phagocytic activity of the cells.

4. A composition used for reducing amyloid plaque formation or diminishing amyloid plaques in a patient, said composition comprising a population of human umbilical cord-derived cells, wherein the isolated human umbilical cord-derived cells are obtained from human umbilical cord tissue substantially free of blood, wherein the isolated cells self-renew and expand in culture and do not express CD117.

5. The composition of claim 4, said composition further comprising pharmaceutically acceptable carriers and/or diluents selected from the group consisting of: saline, aqueous buffer solutions, hydrogels, biomatrices, scaffolds, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

6. The composition of claim 4, wherein said composition is formulated to enhance neural cell survival, differentiation or phagocytic activity of the cells.

7. A kit used for reducing amyloid plaque formation or diminishing amyloid plaques in a patient, said kit comprising the composition of claim 4.

8. The use of claims 1, 2 or 3, wherein the human umbilical cord tissue-derived cells express each of CD10, CD13, CD44, CD73, CD90, PDGFr-alpha, and HLA-A,B,C.

9. The use of any of claims 1, 2, 3 or 8, wherein the cells do not express any of CD31, CD34, CD45, CD141, and HLA-DR,DP,DQ.

10. The composition of any of claims 4, 5 or 6, wherein the human umbilical cord tissue-derived cells express each of CD10, CD13, CD44, CD73, CD90, PDGFr-alpha, and HLA-A,B,C.

11. The composition of any of claims 4, 5, 6 or 10, wherein the cells do not express any of CD31, CD34, CD45, CD141, and HLA-DR,DP,DQ.

12. The composition any of claims 4, 5, 6, 10 or 11, wherein the composition further comprises one other agent selected from the group consisting of extracellular matrix components, microcarriers, microparticulate systems, anti-apoptotic agents, anti-inflammatory compounds, immunosuppressive agents, immunomodulatory agents, and anti-oxidants.

13. The composition of any of claims 4, 5, 6, 10, 11 or 12, wherein the composition further comprises neurotrophic factors.

14. The composition of any of claims 4, 5, 6, 10, 11, 12 or 13, wherein the population of isolated umbilical cord tissue-derived cells is substantially homogenous.

15. The composition of any of claims 4, 5, 6, 10, 11, 12 or 13, wherein the population of isolated umbilical cord tissue-derived cells is homogenous.

16. The use of any of claims 1, 2, 3, 8 or 9, wherein the composition further comprises one other agent selected from the group consisting of extracellular matrix components, microcarriers, microparticulate systems, anti-apoptotic agents, anti-inflammatory compounds, immunosuppressive agents, immunomodulatory agents, and anti-oxidants.

17. The use of any of claims 1, 2, 3, 8, 9 or 16, wherein the composition further comprises neurotrophic factors.

18. The use of any of claims 1, 2, 3, 8, 9, 16 or 17, wherein the population of isolated umbilical cord tissue-derived cells is substantially homogenous.

19. The use of any of claims 1, 2, 3, 8, 9, 16 or 17, wherein the population of isolated umbilical cord tissue-derived cells is homogenous.

20. The composition of claim 4, wherein the population of human umbilical cord-derived cells is pre-treated with electrical stimulation prior to formulation of the composition.

CLAIMS

1. Use of a composition comprising a population of isolated human umbilical cord-derived cells in the manufacture of a medicament for reducing amyloid plaque formation or diminishing amyloid plaques in a patient having symptoms of Alzheimer's disease, wherein the isolated human umbilical cord-derived cells are obtained from human umbilical cord tissue substantially free of blood, wherein the isolated cells self-renew and expand in culture and do not express CD117.

2. The use of claim 1, said composition further comprising pharmaceutically acceptable carriers and/or diluents selected from the group consisting of: saline, aqueous buffer solutions, hydrogels, biomatrices, scaffolds, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

3. The use of claim 1, wherein said composition is formulated to enhance neural cell survival, differentiation or phagocytic activity of the cells.

4. The use of claims 1, 2 or 3, wherein the human umbilical cord tissue-derived cells express each of CD10, CD13, CD44, CD73, CD90, PDGFr-alpha, and HLA-A,B,C.

5. The use of any of claims 1, 2, 3 or 4, wherein the cells do not express any of CD31, CD34, CD45, CD141, and HLA-DR,DP,DQ.

6. The use of any of claims 1, 2, 3, 4 or 5, wherein the composition further comprises one other agent selected from the group consisting of extracellular matrix components, microcarriers, microparticulate systems, anti-apoptotic agents, anti-inflammatory compounds, immunosuppressive agents, immunomodulatory agents, and anti-oxidants.

7. The use of any of claims 1, 2, 3, 4, 5 or 6, wherein the composition further comprises neurotrophic factors.

8. The use of any of claims 1, 2, 3, 4, 5, 6 or 7, wherein the population of isolated umbilical cord tissue-derived cells is substantially homogenous.

9. The use of any of claims 1, 2, 3, 4, 5, 6 or 7, wherein the population of isolated umbilical cord tissue-derived cells is homogenous.

10. The use of any of claims 1, 2, 3, 4, 5, 6 or 7, wherein the population of human umbilical cord-derived cells is pre-treated with electrical stimulation.