CLAIMS

1. Use of a composition comprising a population of isolated human umbilical cord-derived cells in the manufacture of a medicament for the treatment of Alzheimer's disease in a subject diagnosed with Alzheimer's disease, or 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. Use of a composition comprising isolated human umbilical cord-derived cell derivatives in the manufacture of a medicament for treating a subject diagnosed with Alzheimer's disease, or having symptoms of Alzheimer's disease, wherein the cell derivatives are obtained from isolated 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.

3. The use of claim 1, wherein the composition is formulated for local administration of the isolated human umbilical cord-derived cells to a neurotic plaque site.

4. The use of claim 1, wherein the composition is formulated for administration of the isolated human umbilical cord-derived cells to cerebral spinal fluid.

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

6. The use of claim 2, wherein the composition is formulated for local administration of the cell derivatives to a neurotic plaque site.

7. The use of claim 2, wherein the composition is formulated for administration of the cell derivatives to cerebral spinal fluid.

8. The use of claim 2, wherein the cell derivatives are selected form the group consisting of: cell lysates, conditioned media, or a mixture thereof.

9. 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, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

10. The use of any of claims 1, 2, 4, or 5, wherein said human umbilical cord-derived cells are genetically modified to produce therapeutically useful gene products or to produce agents to enhance neural cell survival, differentiation or phagocytic activity of the cells.

11. The use of any of claims 1, 2, 4, or 5, wherein said human umbilical cord-derived cells are genetically modified to produce therapeutically useful gene products or to produce agents to enhance degradation of amyloid plaques, or prevent formation of amyloid plaques.

12. A composition used for treating Alzheimer's disease or the symptoms of Alzheimer's disease, 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.

13. A composition used for treating Alzheimer's disease or the symptoms of Alzheimer's disease, said composition comprising human umbilical cord-derived cell derivatives, wherein the cell derivatives are obtained from isolated 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.

14. The composition of claim 12, said composition further comprising pharmaceutically acceptable carriers and/or diluents selected from the group consisting of: saline, aqueous buffer solutions, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

15. The composition of claim 13, said composition further comprising pharmaceutically acceptable carriers and/or diluents selected from the group consisting of: saline, aqueous buffer solutions, solvents, artificial cerebral spinal fluid, dispersion media composition and a mix thereof.

16. The composition of claim 12, said composition further comprising genetically modified cells that produce therapeutically useful gene products to enhance neural cell survival, differentiation or phagocytic activity of the cells.

17. The composition of claim 13, said composition further comprising genetically modified cells that produce therapeutically useful gene products to enhance neural cell survival, differentiation or phagocytic activity of the cells.

18. The composition of claim 12, said composition further comprising genetically modified cells that produce therapeutically useful gene products to enhance degradation of amyloid plaques, or prevent formation of amyloid plaques.

19. The composition of claim 13, said composition further comprising genetically modified cells that produce therapeutically useful gene products to enhance degradation of amyloid plaques, or prevent formation of amyloid plaques.

20. A kit used for treating Alzheimer's disease or the symptoms of Alzheimer's disease, said kit comprising the composition of claim 12.

21. A kit used for treating Alzheimer's disease or the symptoms of Alzheimer's disease, said kit comprising the composition of claim 13.

22. The use of any of claims 1 to 11, wherein the human umbilical cord tissue-derived cells express each of CD10, CD13, CD44, CD73, CD90, PDGFr-alpha, and HLA-A,B,C.

23. The use of any of claims 1 to 11 or 22, wherein the cells do not express any of CD31, CD34, CD45, CD141, and HLA-DR,DP,DQ.

24. The composition of any of claims 12 to 19, wherein the human umbilical cord tissue-derived cells express each of CD10, CD13, CD44, CD73, CD90, PDGFr-alpha, and HLA-A,B,C.

25. The composition of any of claims 12 to 19 or 24, wherein the cells do not express any of CD31, CD34, CD45, CD141, and HLA-DR,DP,DQ.

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.