CLAIMS

1. Use of a composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for improving visual acuity in a subject suffering from an ocular disease, in which the medicament comprises MLPSCs in an amount sufficient to improve visual acuity.

2. A composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) for use in improving visual acuity in a subject suffering from an ocular disease, wherein the composition comprises MLPSCs in an amount sufficient to improve visual acuity in the subject.

3. Use according to Claim 1 or a composition according to Claim 2, in which the ocular disease is associated with degeneration of the optic nerve.

4. Use or a composition according to Claim 3, in which the ocular disease is associated with degeneration of the optic nerve photoreceptors.

5. Use or a composition according to any preceding claim, in which the subject has previously been treated with an anti-VEGF agent in order to reduce neovascularisation in the optic tissue.

6. Use or a composition according to Claim 5, in which the subject has been treated with:

a monthly dosage of anti-VEGF agent for at least 1 month, or at least 2 months, or at least 3 months; and/or

at least two doses of anti-VEGF agent.

7. Use or a composition according to Claim 5 or 6, in which the agent is an anti-VEGF antibody or fragment thereof.

8. Use or a composition according to any preceding claim, in which the mesenchymal lineage precursor or stem cells are isolated by immunoselection.

9. Use or a composition according to Claim 8, in which the immunoselected cells are culture expanded prior to administration.

10. Use or a composition according to any preceding claim, in which the mesenchymal lineage precursor or stem cells are culture expanded mesenchymal stem cells.

11. Use according to any preceding claim, in which the medicament comprises a dose of MLPSCs comprising:

less than 350,000 cells, or less than 250,000 cells, or less than 100,000 cells, or less than 95,000 cells, or less than 90,000 cells or less than 80,000 cells, or less than 75,000 cells, or less than 70,000 cells;

less than 100,000 cells per mL of vitreous humor, or less than 75,000 cells per mL of vitreous humor, or less than 50,000 cells per mL of vitreous humor, or less than 25,000 cells per mL of vitreous humor, less than 20,000 cells per mL of vitreous humor; or

about 24,500 MPCs per mL of vitreous humor.

12. A composition according to any of claims 1 to 10, which comprises:

-less than 350,000 MLPSCs, or less than 250,000 MLPSCs, or less than 100,000 MLPSCs, or less than 95,000 MLPSCs, or less than 90,000 MLPSCs or less than 80,000 MLPSCs, or less than 75,000 MLPSCs, or less than 70,000 MLPSCs;

less than 100,000 MLPSCs per mL of vitreous humor, or less than 75,000 MLPSCs per mL of vitreous humor, or less than 50,000 MLPSCs per mL of vitreous humor, or less than 25,000 MLPSCs per mL of vitreous humor, less than 20,000 MLPSCs per mL of vitreous humor; or

about 24,500 MPCs per mL of vitreous humor.

13. Use or a composition according to any preceding claim, in which the MLPSCs are formulated as a single dose.

14. Use or a composition according to any preceding claim, in which the MLPSCs are formulated for administration intravitreally.

15. Use or a composition according to any preceding claim, in which the medicament or composition comprises MLPSCs in an amount sufficient to result in at least a 10-point improvement from baseline in composite NEI VFQ-25 score over at least a 3 month period, or at least a 6 month period, or at least a 12 month period, or at least an 18 month period, or at least a 24 month period after administration to a subject.

16. Use or a composition according to any preceding claim, in which the medicament or composition comprises MLPSCs in an amount sufficient to result in an reduction in optical coherence tomograph (OCT) within a 3 month period after administration to a subject.

CLAIMS

1. Use of a composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for improving visual acuity in a subject suffering from an ocular disease, in which the ocular disease is associated with degeneration of the optic nerve, in which the subject has previously been treated with an anti-VEGF agent, and in which the medicament comprises MLPSCs in an amount sufficient to improve visual acuity.

2. A composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) for use in improving visual acuity in a subject suffering from an ocular disease, in which the ocular disease is associated with degeneration of the optic nerve, in which the subject has previously been treated with an anti-VEGF agent and in which the composition comprises MLPSCs in an amount sufficient to improve visual acuity in the subject.

3. Use according to Claim 1 or a composition for use according to Claim 2, in which the ocular disease is associated with degeneration of the optic nerve photoreceptors.

4. Use or a composition for use according to any preceding claim, in which the subject has reduced neovascularisation in the optic tissue.

5. Use or a composition for use according to any preceding claim, in which the subject has been treated with:

a monthly dosage of anti-VEGF agent for at least 1 month, or at least 2 months, or at least 3 months; and/or

at least two doses of anti-VEGF agent.

6. Use or a composition for use according to any preceding claim, in which the agent is an anti-VEGF antibody or fragment thereof.

7. Use or a composition for use according to any preceding claim, in which the mesenchymal lineage precursor or stem cells are isolated by immunoselection.

8. Use or a composition for use according to Claim 7, in which the immunoselected cells are culture expanded prior to administration.

9. Use or a composition for use according to any preceding claim, in which the mesenchymal lineage precursor or stem cells are culture expanded mesenchymal stem cells.

10. Use according to any of Claims 1 and 3 to 9, in which the medicament comprises a dose of MLPSCs comprising:

less than 350,000 cells, or less than 250,000 cells, or less than 100,000 cells, or less than 95,000 cells, or less than 90,000 cells or less than 80,000 cells, or less than 75,000 cells, or less than 70,000 cells;

less than 100,000 cells per mL of vitreous humor, or less than 75,000 cells per mL of vitreous humor, or less than 50,000 cells per mL of vitreous humor, or less than 25,000 cells per mL of vitreous humor, less than 20,000 cells per mL of vitreous humor; or

about 24,500 MPCs per mL of vitreous humor.

11. A composition according to any of Claims 2 to 9, which comprises:

-less than 350,000 MLPSCs, or less than 250,000 MLPSCs, or less than 100,000 MLPSCs, or less than 95,000 MLPSCs, or less than 90,000 MLPSCs or less than 80,000 MLPSCs, or less than 75,000 MLPSCs, or less than 70,000 MLPSCs;

less than 100,000 MLPSCs per mL of vitreous humor, or less than 75,000 MLPSCs per mL of vitreous humor, or less than 50,000 MLPSCs per mL of vitreous humor, or less than 25,000 MLPSCs per mL of vitreous humor, less than 20,000 MLPSCs per mL of vitreous humor; or

about 24,500 MPCs per mL of vitreous humor.

12. Use or a composition for use according to any preceding claim, in which the MLPSCs are formulated as a single dose.

13. Use or a composition for use according to any preceding claim, in which the MLPSCs are formulated for administration intravitreally.

14. Use or a composition for use according to any preceding claim, in which the medicament or composition comprises MLPSCs in an amount sufficient to result in at least a 10-point improvement from baseline in composite NEI VFQ-25 score over at least a 3 month period, or at least a 6 month period, or at least a 12 month period, or at least an 18 month period, or at least a 24 month period after administration to a subject.

15. Use or a composition for use according to any preceding claim, in which the medicament or composition comprises MLPSCs in an amount sufficient to result in an reduction in optical coherence tomograph (OCT) within a 3 month period after administration to a subject.