CLAIMS

1. Use of a composition comprising mesenchymal lineage precursor or stem cells (MPLSCs) and/or exosomes thereof in the manufacture of a medicament for treating cancer, in which the MPLSCs are modified to introduce an inhibitory oligonucleotide or a plasmid expressing the inhibitory oligonucleotide, and in which modified MPLSCs comprise sufficient levels of inhibitory oligonucleotide to effect transfer of between 0.5 to 5 nM of the inhibitory oligonucleotide to a target cancer cell.

2. Use according to Claim 1, in which the inhibitory oligonucleotide is an siRNA.

3. Use according to Claim 1, in which the inhibitory oligonucleotide is one or more of the following:

(i) 12 – 24 nucleotides in length;

(ii) RNA;

(iii) an antisense molecule;

(iv) a KRAS shRNA or siRNA;

(v) comprises the nucleic acid sequence as shown in any one of SEQ ID NOs: 2, 3, 4, 5, 6, 7, 8 or 9;

(vi) the oligonucleotide is 18-22 nucleotides in length;

(vii) miRNA; or

(viii) an miRNA selected from the group consisting of miR-155, miR-155-inh, miR-181-B1, miR-15a, miR-16-1, miR-21, miR-34a, miR-221, miR-29a, let-7b.

4. Use according to Claim 1, 2 or 3, in which the mesenchymal lineage precursor or stem cell is one or more of the following:

(i) STRO-1 positive;

(ii) substantially STRO-1^{bri};

(iii) CD46 positive;

(iv) derived from pluripotent cells;

(v) derived from induced pluripotent stem (iPS) cells;

(vi) a mesenchymal stem cell; or

(vii) culture expanded *in vitro* from a cryopreserved intermediate.

5. Use according to any preceding claim, in which the target cancer cell is from a pancreatic cancer or a colorectal cancer.

6. Use according to any of Claims 1 to 4, in which the cancer is selected from the group consisting of lung cancer, pancreatic cancer, colorectal cancer, liver cancer, cervical cancer, prostate cancer, osteosarcoma or melanoma.

7. Use according to any preceding claim, in which the cancer has a G12D mutation in KRAS.

8. Use according to any preceding claim, in which target cancer cell proliferation is reduced by the inhibitory oligonucleotide without a reduction in target cancer cell viability.

9. Use according to Claim 8, in which the target cancer cell does not express connexin 43.

10. Use according to any one of Claims 1 to 7, in which target cancer cell viability is reduced by the inhibitory oligonucleotide.

11. Use according to Claim 10, in which the mesenchymal lineage precursor or stem cells express a connexin that is also expressed by a target cancer cell in the subject's cancer.

12. Use according to Claim 11, in which the connexin is Cx40 or Cx43.

13. Use according to Claim 12, in which the connexin is Cx43.

14. Use according to any preceding claim, in which the MLPSCs were modified by transfection of the inhibitory oligonucleotide at a concentration from at least 100 nM to about 1 μM.

15. Use according to Claim 14, in which the MLPSCs were modified by transfection of the inhibitory oligonucleotide at a concentration of at least 200 nM.

16. Use according to Claim 14, in which the MLPSCs were modified by transfection of the inhibitory oligonucleotide at a concentration of at least 500 nM.

CLAIMS

1. Use of a composition comprising mesenchymal precursor cells (MPCs) or mesenchymal stem cells (MSCs) comprising a KIF11 siRNA or a vector for expressing a KIF11 shRNA in the manufacture of a medicament for delivery of the KIF11 siRNA or shRNA to cancer target cells.

2. Use according to Claim 1, in which the KIF11 siRNA or KIF11 shRNA comprises the nucleic acid sequence as shown in any one of SEQ ID NOs: 2, 3, 4, 5, 6, 7, 8 or 9.

3. Use according to any preceding claim, in which the composition comprises MPCs.

4. Use according to any preceding claim, in which the target cancer cell is from a pancreatic cancer or a colorectal cancer.

5. Use according to any preceding claim, in which the KIF 11 siRNA or shRNA kills a target cancer cell to which the siRNA or shRNA is transferred, but does not substantially affect viability of MPC from which the siRNA or shRNA is transferred.

6. Use according to any preceding claim, in which the MPCs express STRO-1.

7. Use according to any preceding claim, in which when the MPCs are contacted with a target cell, the MPCs form a gap junction with the target cancer cell, whereby the KIF11 siRNA or shRNA is delivered to the target cancer cell by traversing the gap junction.

8. Use according to Claim 7, in which the target cancer cell does not express connexin 43.

9. Use according to Claim 8, in which the target cancer cell viability is a white blood cell.

10. Use according to Claim 9, in which the mesenchymal lineage precursor or stem cells express a connexin that is also expressed by a target cancer cell in the subject's cancer.

11. Use according to any preceding claim, in which the target cancer cell is a syncytial cancer cell.

12. Use according to any preceding claim, in which the MPCs or MSC were transfected with a KIF11 siRNA at a concentration from at least 100 nM to about 500 nM.

13. Use according to Claim 12, in which the MLPSCs were modified by transfection of the inhibitory oligonucleotide at a concentration of at least 200 nM.

14. Use according to Claim 12, in which the MLPSCs were modified by transfection of the inhibitory oligonucleotide at a concentration of about 500 nM.