

CLAIMS

1. Use of a composition comprising mesenchymal lineage precursor or stem cells in the preparation of a medicament for treating or preventing progressive heart failure in a subject, in which the subject has micro-vascular disease and/or macro-vascular disease and in which the subject's CRP level is ≥ 2 mg/L.
2. Use of a composition comprising mesenchymal lineage precursor or stem cells in the preparation of a medicament for reducing risk of cardiac death, or a non-fatal ischaemic event in a subject, in which the subject has micro-vascular disease and/or macro-vascular disease and in which the subject's CRP level is ≥ 2 mg/L.
3. Use according to Claim 1 or 2, in which the subject has myocardial ischemia and/or diabetes.
4. Use according to Claim 1, 2 or 3, in which:
 - the subject has a LVEF of less than about 45%;
 - the subject has a LVEF of less than 40%;
 - the subject has a LVESV greater than 70 ml;
 - the subject has a LVESV between 70 ml and 160 ml.
5. Use according to any preceding claim, in which the subject has Class II or Class III heart failure according to the New York Heart Association (NYHA) classification scale.
6. Use according to any preceding claim, in which:
 - the subject's level of N-terminal pro-B-type natriuretic peptide (NT-proBNP) is >1000 pg/mL, or between 1000 pg/ml and 2500 pg/ ml;
 - the subject's C-reactive protein (CRP) level is <5 mg/L, <4 mg/L, or <3 mg/L;
 - the subject has had a heart failure hospitalisation event over the previous 9 months;
 - the subject has persistent left ventricular dysfunction; or
 - the subject's heart failure results from an ischaemic event or from a non-ischaemic event.

7. Use according to any preceding claim, in which the subject has a reduced risk of cardiac death after treatment, in which the reduced risk is relative to risk of cardiac death in a subject that has not been administered mesenchymal lineage precursor or stem cells.
8. Use according to any preceding claim, in which the subject has a reduced risk of
- 5 ischaemic MACE after treatment, in which the MACE is MI or stroke.
9. Use according to any preceding claim, in which the composition is to be administered transendocardially and/or intravenously.
10. Use according to any preceding claim, in which the mesenchymal lineage precursor or stem cells are mesenchymal precursor cells (MPCs).
- 10 11. Use according to any of Claims 1 to 9, in which the mesenchymal lineage precursor or stem cells are mesenchymal stem cells (MSCs).
12. Use according to any preceding claim, in which:
 - the cells are allogeneic;
 - the cells are culture expanded;
 - 15 the cells are isolated from bone mononuclear cells with an anti-STRO-3 antibody;
 - the cells are STRO-3+ before they are culture expanded; and/or
 - the cells have been cryopreserved.
13. Use according to any preceding claim, in which between 1×10^7 and 2×10^8 cells are to be administered to the subject.
- 20 14. Use according to any preceding claim, in which the composition further comprises Plasma-Lyte A (70%), DMSO (10%), HSA (25%) solution, the HSA solution comprising 5% HSA and 15% buffer, in which the composition comprises greater than 6.68×10^6 viable cells/mL.
15. Use according to any preceding claim, in which the composition comprises human bone
- 25 marrow-derived allogeneic mesenchymal precursor cells (MPCs) isolated from bone mononuclear cells with anti-STRO-3 antibodies, expanded *ex vivo*, and cryopreserved.

16. Use according to any of Claims 2 to 15, in which the ischaemic event is formation of an arterial occlusion, a cerebrovascular occlusion, or a cardiac occlusion.
17. Use according to any of Claims 2 to 15, in which the non-fatal ischaemic event is a stroke or myocardial infarction.
- 5 18. Use according to any preceding claim, in which the subject has myocardial ischemia.
19. Use according to any of Claims 1 to 17, in which the subject has diabetes.
20. A method of selecting heart failure patients for treatment with mesenchymal lineage precursor or stem cells, the method comprising (i) assessing the subject for a micro-vascular disease and/or a macro-vascular disease and CRP level, and (ii) selecting a subject having a
10 micro-vascular disease and/or a macro-vascular disease and CRP levels of ≥ 2 mg/L for treatment.
21. A method according to Claim 20, in which the subject has myocardial ischemia.
22. A method according to Claim 20 or 21, in which the subject has diabetes.