CLAIMS

1. Use of a composition comprising a population of culture expanded, cryopreserved and thawed mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for treating or preventing hyperinflammation in a human subject in need thereof.

2. Use according to Claim 1, in which the hyperinflammation is caused by a viral infection.

3. Use according to Claim 2 in which the viral infection is caused by COVID-19.

4. Use of a composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for treating or preventing a disease associated with elevated D-dimer levels in a human subject in need thereof.

5. Use according to Claim 4, in which the disease is thrombosis or pulmonary embolism.

6. Use according to Claim 5, in which the thrombosis is arterial thrombosis.

7. Use according to any preceding claim, in which the subject also has Acute Respiratory Distress Syndrome (ARDS).

8. Use according to any preceding claim, in which the MLPSCs are culture expanded from an intermediate cryopreserved MLPSCs population.

9. Use according to any preceding claim, in which the MLPSCs are culture expanded for at least about 5 passages.

10. Use according to any preceding claim, in which the subject has MIS.

11. Use according to any preceding claim, in which the subject has viral myocarditis.

12. Use according to any preceding claim, in which the MLPSCs are mesenchymal stem cells (MSCs).

13. Use according to any preceding claim, in which the MLPSCs are modified to carry or express an anti-viral drug or thrombolytic agent.

14. Use according to any preceding claim, in which the medicament comprises a dose of between 1×10^7 and 2×10^8 cells.

15. Use according to any of Claims 1 to 13, in which the medicament comprises a dose of about 1 x 10^8 cells.

16. Use according to Claim 14 or 15, in which the medicament comprises two doses.

17. Use according to any preceding claim, in which the subject's circulating CRP levels decrease after administration of the medicament.

18. Use according to any preceding claim, in which the subject's white blood cell count decreases after administration of the medicament.

19. Use according to any preceding claim, in which the subject's FiO2 levels decrease after administration of the medicament and/or the subject's P/F ratio increases after administration of the medicament.

20. Use according to any preceding claim, in which, after administration of the medicament, the subject's:

D-dimer level is reduced;

BNP level is reduced; and/or

LVEF% is increased.

21. Use according to Claim 20, in which the subject's D-dimer level is reduced to below 15 μg/ml after administration of the medicament.

22. 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.

23. Use according to any preceding claim, in which the composition comprises greater than 6.68x10^6 viable cells/mL.

24. Use according to Claim 10, in which the subject is a child.

25. Use according to Claim 20, in which treatment reduces the subject's D-dimer level below 5 μg/ml.