THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of extending *ex vivo* viability of a HPC and/or HSC population, or culturing or expanding a HPC and/or HSC population said method comprising culturing the HPC and/or HSC population in the presence of at least one of ficolin-1, ficolin-2, ficolin-3, or fragments or functional equivalents thereof.

2. The method according to claim 1, wherein renewal capacity and/or pluripotency of the HPC and/or HSC is maintained or increased.

3. The method according to claim 1 or claim 2, wherein the HSC and/or HPC are further cultured in an environment wherein a concentration of oxygen is less than a normal ambient oxygen concentration.

4. The method according to any one of claims 1 – 3, wherein the HSC and/or HPC are cultured in the presence of at least one of ficolin-1, ficolin-2, ficolin-3, and fragments or functional equivalents thereof at a concentration of in the range of approximately 50 ng/ml - 200 ng/ml.

5. The method according to claim 4, wherein the HSC and/or HPC are cultured in the presence of ficolin-1 or fragments or functional equivalents thereof.

6. The method according to any one of claims 3 – 5, wherein the concentration of oxygen is less than approximately 20%.

7. The method according to any one of claims 3 – 6, wherein the concentration of oxygen is less then approximately 12%.

8. The method according to any one of claims 3 – 7, wherein the concentration of oxygen is between approximately of 5% - 10%.

9. The method according to any one of claims 3 – 8, wherein the concentration of oxygen is approximately 5%.

10. The method according to any one of claims 1 – 9, wherein the HSC and/or HPC are cultured in the presence of growth factors selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin.

11. The method according to any one of claims 1 – 10, wherein the HSC and/or HPC are cultured in the presence of growth factors thrombopoietin, stem cell factor, Flt-3 ligand and interleukin 6.

12. The method according to claims 10 or claim 11, wherein the growth factors are provided at a concentration of about 50 ng/mL – 100 ng/mL.

13. The method according to claim 11 wherein thrombopoietin is provided at about 50 ng/mL, stem cell factor is provided at about 50 ng/mL, Flt-3 ligand is provided at about 80ng/mL and interleukin 6 is provided at about 100 ng/mL

14. The method according to any one of claims 1 – 13, wherein the HPC are cultured to increase the number of HPC relative to the initial number of HPCs to produce a second amount of HPCs.

15. The method according to claim 14, wherein the second amount of HPC are isolated and further cultured in a separate culture medium.

16. The method according to claim 15, wherein the separate culture medium comprises a growth factor selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin that promotes HPC maintenance, expansion and/or differentiation, to produce differentiated cells of hematopoietic origin.

17. The method according to claim 16, wherein the medium includes inoculated stromal cells and/or is a stromal cell conditioned medium.

18. The method according to any one of claims 1 to 17, wherein the HPC are cultured for a period of 6 – 8 weeks prior to expansion and/or differentiation of HPC and/or HSC.

19. The method according to any one of claims 1 – 18, wherein the HSC are obtained from blood products selected from the group comprising unfractionated bone marrow, umbilical cord, peripheral blood, liver, thymus, lymph and spleen. .

20. A medium for extending *in vitro* viability of HSC and/or HPC in culture including hematopoietic growth factors selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin and at least one agent to enhance the self-renewal and/or inhibits the differentiation of HSC or HPC.

21. The medium according to claim 20, wherein the agent is selected from the group consisting of ficolin-1, ficolin-2, ficolin-3, and fragments or functional equivalents thereof.

22. The medium according to claim 21, wherein the ficolin-1, ficolin-2, ficolin-3, or fragments or functional equivalents thereof are present at a concentration in the range of approximately 50 ng/ml - 200 ng/ml

23. The medium according to claim 22, wherein the at least one agent is ficolin-1 or a fragment or functional equivalent thereof.

24. A population of cells derived from HSC and/or HPC when cultured according to the method of any one of claims 1 – 19.

25. A population of cells derived from HSC and/or HPC when cultured using the medium of any one of claims 20 – 23.

26. The population of cells derived from HSC and/or HPC when cultured using the culture medium of any one of claims 20 – 23 and when used according to the method of any one of claims 1 – 19.

27. The population of cells derived from HSC and/or HPC according to any one of claims 24 – 26 wherein the derived cells are expanded HSC and/or HPC cells

28. The population of cells derived from HSC and/or HPC according to any one of claims 24 – 26 wherein the cells are CD34+ cells, CD34+CD133+ and CD34+CD38- cells.

29 The population of cells according to any one of claims 24 – 28 wherein the cells can be formulated for clinical haemopoietic stem cell transplantation, or for augmentation of haemopoietic function in a subject in need thereof.

30. The population of cells according to claim 29, wherein the subject is a human.

31. A method of treating a condition associated with an absence of haemopoietic function, comprising administering to a subject in need thereof a therapeutically effective amount of a population of cells according to any one of claims 24 – 28.

32. The method of claim 31, wherein the subject is a mammal.

33. The method of claim 32, wherein the mammal is a human.

34. The method according to claim 1, substantially as hereinbefore described with reference to any of the examples and/or figures.

35. The medium according to claim 20, substantially as hereinbefore described with reference to any of the examples and/or figures.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of extending *ex vivo* viability of a HPC and/or HSC population, or culturing or expanding a HPC and/or HSC population said method comprising culturing the HPC and/or HSC population in the presence of at least one of ficolin-1, ficolin-2, ficolin-3, or fragments or functional equivalents thereof.

2. The method according to claim 1, wherein renewal capacity and/or pluripotency of the HPC and/or HSC is maintained or increased.

3. The method according to claim 1 or claim 2, wherein the HSC and/or HPC are further cultured in an environment wherein a concentration of oxygen is less than a normal ambient oxygen concentration.

4. The method according to any one of claims 1 – 3, wherein the HSC and/or HPC are cultured in the presence of at least one of ficolin-1, ficolin-2, ficolin-3, and fragments or functional equivalents thereof at a concentration of in the range of approximately 50 ng/ml - 200 ng/ml.

5. The method according to claim 4, wherein the HSC and/or HPC are cultured in the presence of ficolin-1 or fragments or functional equivalents thereof.

6. The method according to any one of claims 3 – 5, wherein the concentration of oxygen is less than approximately 20%.

7. The method according to any one of claims 3 – 6, wherein the concentration of oxygen is less then approximately 12%.

8. The method according to any one of claims 3 – 7, wherein the concentration of oxygen is between approximately of 5% - 10%.

9. The method according to any one of claims 3 – 8, wherein the concentration of oxygen is approximately 5%.

10. The method according to any one of claims 1 – 9, wherein the HSC and/or HPC are cultured in the presence of growth factors selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin.

11. The method according to any one of claims 1 – 10, wherein the HSC and/or HPC are cultured in the presence of growth factors thrombopoietin, stem cell factor, Flt-3 ligand and interleukin 6.

12. The method according to claims 10 or claim 11, wherein the growth factors are provided at a concentration of about 50 ng/mL – 100 ng/mL.

13. The method according to claim 11 wherein thrombopoietin is provided at about 50 ng/mL, stem cell factor is provided at about 50 ng/mL, Flt-3 ligand is provided at about 80ng/mL and interleukin 6 is provided at about 100 ng/mL

14. The method according to any one of claims 1 – 13, wherein the HPC are cultured to increase the number of HPC relative to the initial number of HPCs to produce a second amount of HPCs.

15. The method according to claim 14, wherein the second amount of HPC are isolated and further cultured in a separate culture medium.

16. The method according to claim 15, wherein the separate culture medium comprises a growth factor selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin that promotes HPC maintenance, expansion and/or differentiation, to produce differentiated cells of hematopoietic origin.

17. The method according to claim 16, wherein the medium includes inoculated stromal cells and/or is a stromal cell conditioned medium.

18. The method according to any one of claims 1 to 17, wherein the HPC are cultured for a period of 6 – 8 weeks prior to expansion and/or differentiation of HPC and/or HSC.

19. The method according to any one of claims 1 – 18, wherein the HSC are obtained from blood products selected from the group comprising unfractionated bone marrow, umbilical cord, peripheral blood, liver, thymus, lymph and spleen. .

20. A medium when used for expanding *in vitro* populations of HSC and/or HPC in culture including hematopoietic growth factors selected from the group comprising interleukins 3, 6 and 11, stem cell factor, stem cell ligand, FLT-3 ligand, and thrombopoietin and at least one agent to enhance the self-renewal and/or inhibits the differentiation of HSC or HPC selected from the group consisting of ficolin-1, ficolin-2, ficolin-3, and fragments or functional equivalents thereof.

21. The medium according to claim 20, wherein the ficolin-1, ficolin-2, ficolin-3, or fragments or functional equivalents thereof are present at a concentration in the range of approximately 50 ng/ml - 200 ng/ml

22. The medium according to claim 21, wherein the at least one agent is ficolin-1 or a fragment or functional equivalent thereof.

23. A population of cells derived from HSC and/or HPC when cultured according to the method of any one of claims 1 – 19 wherein the populations of cells derived from HSC and/or HPC are expanded compared to the population prior to culture.

24. A population of cells derived from HSC and/or HPC when cultured using the medium of any one of claims 20 – 22 wherein the populations of cells derived from HSC and/or HPC are expanded compared to the population prior to culture.

25. The population of cells derived from HSC and/or HPC when cultured using the culture medium of any one of claims 20 – 22 and when used according to the method of any one of claims 1 – 19.

26. The population of cells derived from HSC and/or HPC according to any one of claims 23 – 25 wherein the derived cells are expanded HSC and/or HPC cells populations.

27. The population of cells derived from HSC and/or HPC according to any one of claims 23 – 25 wherein the cells are CD34+ cells, CD34+CD133+ and CD34+CD38- cells.

28 The population of cells according to any one of claims 23 – 27 wherein the cells can be formulated for clinical haemopoietic stem cell transplantation, or for augmentation of haemopoietic function in a subject in need thereof.

29. The population of cells according to claim 28, wherein the subject is a human.

30. A method of treating a condition associated with an absence of haemopoietic function, comprising administering to a subject in need thereof a therapeutically effective amount of a population of cells according to any one of claims 23 – 27.

31. The method of claim 30, wherein the subject is a mammal.

32. The method of claim 31, wherein the mammal is a human.

33. The method according to claim 1, substantially as hereinbefore described with reference to any of the examples and/or figures.

34. The medium according to claim 20, substantially as hereinbefore described with reference to any of the examples and/or figures.