CLAIMS

1. A combination comprising at least one antithrombin activator, at least one thrombin inhibitor, and cells selected from the group consisting of adult liver progenitor cells and liver myofibroblasts, wherein

- the antithrombin activator is selected from the group consisting of heparin, unfractionated heparin, low molecular weight heparin and fondaparinux; and

- the thrombin inhibitor is selected from the group consisting of bivalirudin and hirudin

2. The combination according to claim 1, wherein the adult liver progenitor cells are adult liver-derived progenitor or stem cells which express alpha-smooth muscle actin (ASMA) and albumin (ALB) and do not express cytokeratin-19 (CK-19), or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and epithelial cells, or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and endothelial cells.

3. The combination according to any of claims 1 or 2, wherein the cells:

- are primary cells; or

- are a cell line; or

- have been subjected to storage, such as to cryopreservation, and/or to proliferation or passaging; or

- are induced to express one or more proteins, such as one or more proteins which are autologous to the cells or which are not autologous to the cells, or to increase or decrease or completely or substantially completely block the expression thereof; or

- are stably or transiently transformed with a nucleic acid, such as a nucleic acid encoding a gene product that enhances the growth, differentiation and/or functioning of the cells.

~~3~~4. The combination according to any of claims 1 ~~or 2~~to 3 configured for separate, simultaneous or sequential in any order administration of said cells, at least one antithrombin activator and at least one thrombin inhibitor to a subject.

45. The combination according to any one of claims 1 to ~~3~~4, wherein the antithrombin activator is unfractionated heparin.

~~5~~6. The combination according to any one of claims 1 to 45, wherein the thrombin inhibitor is bivalirudin.

7. The combination according to any one of claims 1 to 6, wherein the cells and the at least one antithrombin activator are included in a cell suspension.

~~6~~8. A pharmaceutical composition comprising the combination according to any one of claims 1 to ~~5~~7 and one or more pharmaceutically acceptable excipients, wherein the pharmaceutical composition is liquid, semi-solid, or solid.

9. The pharmaceutical composition according to claim 8, wherein the pharmaceutical composition is liquid, and the cells are present in the pharmaceutical composition at a concentration between 10^4/ml to 10^8/ml, preferably between 10^5/ml and 10^7/ml, more preferably between $1x10^6$/ml and $1x10^7$/ml, or $5x10^6$/ml.

~~7~~10. The combination according to any one of claims 1 to ~~5~~7 or the pharmaceutical composition according to ~~claim 6~~any one of claims 8 or 9 for use as a medicament.

~~8~~11. Use of the combination according to any one of claims 1 to ~~5~~7 or the pharmaceutical composition according to ~~claim 6~~any one of claims 8 or 9 ~~for~~ in the manufacture of a medicament ~~for transplantation of the cells; or~~ for the

treatment of thrombosis or thrombotic complications caused by transplantation of said cells; or for inhibiting procoagulant activity of said cells *in vivo*.

~~9~~12. The combination or pharmaceutical composition for use according to claim ~~7~~10, wherein the antithrombin activator is unfractionated heparin to be administered to a subject via a cell suspension comprising about 5-15 UI/ml, preferably about 8-12 UI/ml, more preferably about 10 UI/ml or by intravenous administration at about 10-30 UI/kg/hr, preferably about 15-25 UI/kg/hr, more preferably about 20 UI/kg/hr and/or wherein the thrombin inhibitor is bivalirudin to be administered to a subject ~~respectively~~ at between about 0.50 and about 3.00 mg/kg body weight~~ or between about 0.2 and 0.6 mg/kg body weight~~.

~~10~~13. The combination or pharmaceutical composition for use according to claim ~~7~~10, wherein (a) a composition comprising a cell suspension of the cells in an aqueous solution containing the at least one antithrombin activator is to be prepared; (b) an aqueous solution containing the at least one thrombin inhibitor is to be prepared; and (c) the composition as defined in (a) and the solution as defined in (b) is to be administered simultaneously, separately or sequentially to a subject.

~~11~~14. The use according to claim ~~8~~11, wherein the antithrombin activator is unfractionated heparin to be administered to a subject via a cell suspension comprising about 5-15 UI/ml, preferably about 8-12 UI/ml, more preferably about 10 UI/ml or by intravenous administration at about 10-30 UI/kg/hr, preferably about 15-25 UI/kg/hr, more preferably about 20 UI/kg/hr and/or wherein the thrombin inhibitor is bivalirudin to be administered to a subject ~~respectively~~ at between about 0.50 and about 3.00 mg/kg body weight~~ or between about 0.2 and 0.6 mg/kg body weight~~.

~~12~~15. The use according to claim ~~8~~11, wherein (a) a composition comprising a cell suspension of the cells in an aqueous solution containing the at least one antithrombin activator is to be prepared; (b) an aqueous solution containing the at least one thrombin inhibitor is to be prepared; and (c) the composition as defined in (a) and the solution as defined in (b) is to be administered simultaneously, separately or sequentially to a subject.

~~13~~16. A method for inhibiting *in vitro* the procoagulant activity of cells selected from the group consisting of adult liver progenitor cells and liver myofibroblasts, comprising providing a combination comprising said cells, at least one antithrombin activator, and at least one thrombin inhibitor, wherein:

- the antithrombin activator is selected from the group consisting of heparin, unfractionated heparin, low molecular weight heparin and fondaparinux; and

- the thrombin inhibitor is selected from the group consisting of bivalirudin and hirudin.

~~14~~17. A kit of parts or an article of manufacture comprising the combination according to any one of claims 1 to ~~5~~ 7 and optionally comprising one or more pharmaceutically acceptable excipients.

18. The kit according to claim 17, wherein:

- the cells, the at least one antithrombin activator, and the at least one thrombin inhibitor are admixed; or
- the cells, the at least one antithrombin activator, and at least one thrombin inhibitor are contained in separate containers; or
- the cells and the at least one antithrombin activator are included in a cell suspension in a container separate from a container containing the at least one thrombin inhibitor.

~~15~~19. Use of a combination comprising at least one antithrombin activator and at least one thrombin inhibitor, or a pharmaceutical composition comprising said combination and one or more pharmaceutically acceptable excipients, ~~for~~ in the manufacture of a medicament ~~for transplantation of cells selected from the group consisting of adult liver progenitor cells and liver myofibroblasts; or~~ for the treatment of thrombosis or thrombotic complications caused by ~~transplantation~~ procoagulant activity of ~~said~~ cells selected from the group consisting of adult liver progenitor cells and liver myofibroblasts upon transplantation thereof; or for inhibiting procoagulant activity of said cells *in vivo*, wherein:

- the antithrombin activator is selected from the group consisting of heparin, unfractionated heparin, low molecular weight heparin and fondaparinux; and

- the thrombin inhibitor is selected from the group consisting of bivalirudin and hirudin.

~~16~~20. The use according to claim ~~15~~19, ~~further including the characterising feature or features as defined in any one of claims 2 to 5, 11 or 12.~~ wherein:

- the adult liver progenitor cells are adult liver-derived progenitor or stem cells which express alpha-smooth muscle actin (ASMA) and albumin (ALB) and do not express cytokeratin-19 (CK-19), or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and epithelial cells, or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and endothelial cells; and/or
- the combination is configured for separate, simultaneous or sequential in any order administration of said at least one antithrombin activator and at least one thrombin inhibitor to a subject; and/or
- the antithrombin activator is unfractionated heparin; and/or
- the thrombin inhibitor is bivalirudin; and/or
- the antithrombin activator is unfractionated heparin to be administered to a subject by intravenous administration at about 10-30 UI/kg/hr, preferably about 15-25 UI/kg/hr, more preferably about 20 UI/kg/hr and/or wherein the thrombin inhibitor is bivalirudin to be administered to a subject at between about 0.50 and about 3.00 mg/kg body weight.

~~17~~21. A method for inhibiting *in vitro* the procoagulant activity of cells selected from the group consisting of adult liver progenitor cells and liver myofibroblasts comprising contacting said cells with a combination comprising at least one antithrombin activator and at least one thrombin inhibitor, wherein:

- the antithrombin activator is selected from the group consisting of heparin, unfractionated heparin, low molecular weight heparin and fondaparinux; and
- the thrombin inhibitor is selected from the group consisting of bivalirudin and hirudin.

22. The method according to claim 16 or 21, wherein the adult liver progenitor cells are adult liver-derived progenitor or stem cells which express alpha-smooth muscle actin (ASMA) and albumin (ALB) and do not express cytokeratin-19 (CK-19), or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and epithelial cells, or are non-oval adult human liver-derived pluripotent progenitor cells which express hepatic cell markers and which are capable of differentiating into mature liver cells, insulin-producing cells, osteogenic cells and endothelial cells.