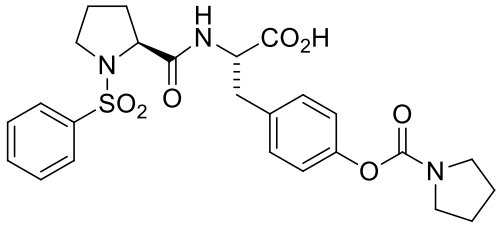
THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An antagonist of an α9 integrin for use in mobilising bone marrow hematopoietic cells (HSC) and progenitors thereof into the peripheral blood of a subject, wherein the antagonist of an α9 integrin is:



or a pharmaceutically acceptable salt thereof.

2. The antagonist of an α9 integrin for use according to claim 1, wherein the antagonist of an α9 integrin is an α9β1 integrin antagonist.

3. The antagonist of an α9 integrin for use according to claim 1 or claim 2 with an antagonist of α4 integrin.

4. The antagonist of an α9 integrin for use according to claim 3, wherein the antagonist of α4 integrin is an α4β1 integrin antagonist.

5. The antagonist of an α9 integrin for use according to any one of claims 1 to 4, wherein the antagonist of an α9 integrin mobilises the HSC and progenitors thereof from the bone marrow stem cell niche, or the central or endosteal niche of the bone marrow into the peripheral blood.

6. The antagonist of an α9 integrin for use according to any one of claims 1 to 5, wherein the HSC or progenitors are endosteal HSC or progenitor cells selected from the group including CD34+cells, CD38+ cells, CD90+ cells, CD133+ cells, CD34+CD38− cells, lineage-committed CD34− cells, or CD34+CD38+ cells and their precursors and progenitors thereof.

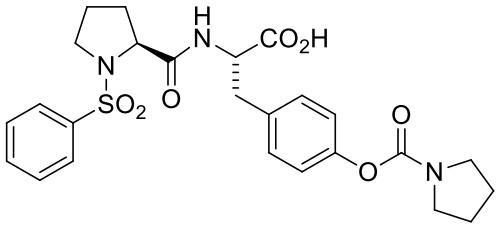
7. The antagonist of an α9 integrin for use according to any one of claims 1 to 6 in the absence of G-CSF.

8. The antagonist of an α9 integrin for use according to any one of claims 1 to 7, wherein the mobilised HSC and progenitors thereof can be harvested from the peripheral blood.

9. The antagonist of an α9 integrin for use according to claim 8, wherein the harvested HSC and progenitors thereof can be transplanted into a subject following therapy to treat a haematological disorder, wherein the transplantation repopulates hematopoietic and lymphocytic cell populations depleted during therapy.

10. The antagonist of an α9 integrin for use according to claim 9, wherein the HSC and progenitors thereof are allogeneic.

11. An antagonist of α9 integrin for use in harvesting hematopoietic stem cells (HSC) and progenitors thereof from the peripheral blood of a subject, wherein the α_9 integrin antagonist mobilises the HSC and progenitors thereof from the bone marrow into the peripheral blood of a subject, and wherein the the α_9 integrin antagonist is:



or a pharmaceutically acceptable salt thereof.

12. The antagonist of an α9 integrin for use according to claim 11, wherein the antagonist of an α9 integrin is an α9β1 integrin antagonist.

13. The antagonist of an α9 integrin for use according to claim 11 or claim 12 with an antagonist of α4 integrin.

14. The antagonist of an α9 integrin for use according to claim 13, wherein the antagonist of α4 integrin is an α4β1 integrin antagonist.

15. The antagonist of an α9 integrin for use according to any one of claims 11 to 14, wherein the antagonist of an α9 integrin mobilises the HSC and progenitors thereof from the bone marrow stem cell niche, or the bone marrow central or endosteal niche into the peripheral blood.

16. The antagonist of an α9 integrin for use according to any one of claims 11 to 15, wherein the HSC or progenitors are endosteal HSC or progenitor cells selected from the group including CD34+cells, CD38+ cells, CD90+ cells, CD133+ cells, CD34+CD38− cells, lineage-committed CD34− cells, or CD34+CD38+ cells and their precursors and progenitors thereof.

17. The antagonist of an α9 integrin for use according to any one of claims 11 to 16 in the absence of G-CSF.

18. The antagonist of an α9 integrin for use according to any one of claims 11 to 17, wherein the HSC and progenitors thereof can be transplanted by reintroducing the cells into the same subject or transplanting the cells into a second subject with a haematological disorder.

19. The antagonist of an α9 integrin for use according to any one of claims 9, 10 or 18, wherein the haematological disorder is selected from haematological neoplastic disorders, autoimmune diseases, cancers, and non-malignant disorders.

20. The antagonist of an α9 integrin for use according to claim 19, wherein the haematological disorder is a haematological neoplastic disorder selected from poorly differentiated acute leukemias, myeloid disorders, lymphoid malignancies, and

malignant lymphomas; autoimmune diseases are selected from multiple sclerosis (MS), myasthenia gravis, autoimmune neuropathy, scleroderma, aplastic anemia, and systemic lupus erythematosus; and non-malignant disorders are selected from aplastic anemia, a hemoglobinopathy, including sickle cell anemia, or an immune deficiency disorder.

21. The antagonist of an α9 integrin for use according to claim 20, wherein the acute leukemias are selected from erythroblastic leukemia and acute megakaryoblastic leukemia; myeloid disorders are selected from acute promyeloid leukemia (APML), chronic myelogenous leukemia (CML); lymphoid malignancies are selected from acute lymphoblastic leukemia (ALL), chronic lymphocytic leukemia (CLL), prolymphocytic leukemia (PLL), hairy cell leukemia (HCL) and Waldenstrom's macroglobulinemia (WM); and malignant lymphomas are selected from Hodgkin's Disease and Medium/High grade (aggressive) Non-Hodgkin's lymphoma and variants thereof, peripheral T cell lymphomas, adult T cell leukemia/lymphoma (ATL), cutaneous T-cell lymphoma (CTCL), large granular lymphocytic leukemia (LGF), Hodgkin's disease and Reed- Sternberg disease.

22. The antagonist of an α9 integrin for use according to claim 21, wherein the acute lymphoblastic leukemia (ALL) is selected from B-lineage ALL and T-lineage ALL.

23. The antagonist of an α9 integrin for use according to any one of claims 1 to 7 for use in harvesting HSC and progenitors thereof from the peripheral blood for transplanting into a subject.