CLAIMS

1. Use of at least one inhibitor of dipeptidyl peptidase IV (DPP-IV) in the manufacture of a composition for the treatment of haematopoetic stem cell transplanted recipients, wherein said haematopoetic stem cells had been treated *in vitro* before transplantation with Treprostinil or a pharmaceutical acceptable salt thereof and forskolin, and wherein the DPP-IV inhibitor is to be administered for a period of at least 1 day after haematopoetic stem cell transplantation, and wherein the DPP-IV inhibitor is vildagliptin.

2. The use according to claim 1, wherein the DPP-IV inhibitor is also to be administered at least 5, specifically at least 10, specifically at least 15, specifically at least 24 hours before the haematopoetic stem cell transplantation.

3. The use according to claim 1 or 2 wherein the DPP-IV inhibitor is to be administered for a period of at least 1, specifically at least 2, specifically at least 3, specifically at least 4 days after haematopoetic stem cell transplantation.

4. The use according to any one of claims 1 to 3, wherein the recipients are individuals suffering from bone marrow disease.

5. The use according to claim 4, wherein the bone marrow disease is leukemia, a defect of the blood cell compartment, bone marrow disease induced by chemotherapy or irradiation.

6. The use according to claim 5 wherein said defect of the blood cell compartment is a hemoglobinopathy, a defect in neutrophil granulocyte function or a defect in T- and/or B-lymphocytes.