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METHOD FOR MOBILIZING HEMATOPOIETIC STEM CELLS USING VLA4 INHIBITORS

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Value Proposition: *VLA4 inhibitors that significantly mobilize hematopoietic stem cells from bone marrow.*

Technology Description

Researchers at Washington University in St. Louis have developed novel VLA4 inhibitors for mobilizing hematopoietic stem cells in peripheral blood for collection and transplantation in blood cancer patients. Mobilizing hematopoietic stem cells into the peripheral blood is critical for hematopoietic stem cell transplants in blood cancers. The current mobilizing agent is G-CSF, and the patient or donor must receive G-CSF injections daily for over a week to mobilize a high enough concentration of blood stem cells to be withdrawn, frozen, and then re-infused into the blood.

This invention allows for synergistic HSC mobilization with VLA-4 + CXCR4 inhibitors, thus achieving the same degree of mobilization as the current market mobilizing agent just 24 hours after a single injection, thus improving convenience and dramatically reducing the cost of the mobilization procedure.

Stage of Research

Pre-clinical testing in mice and Non-Human Primates.

Applications

- Hematopoietic stem cell mobilization for transplantation for Leukemia and Lymphomas indications

Key Advantages

- Non-human primate data with proprietary compounds
- Reduces mobilization costs and timeline
- Improves mobilization success rate and patient compliance
- Allows for improvement in safety and patient tolerability compared to G-CSF

Patents

PCT patent pending

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