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Technology Transfer Office

SHIP Inhibition to Enhance Transplantation and Hematopoiesis

Researchers at the University of South Florida have discovered that inhibition of SH2- containing inositol phosphatase (SHIP) ameliorates transplant rejection and stimulates hematopoiesis.

Tissue rejection or graft vs host disease (GVHD) is a significant concern in allogenic transplant medicine. GVHD is the major cause of treatment related mortality in transplant procedures. SHIP inhibition specifically works to target antigen presenting cells, thereby alleviating rejection.

Furthermore, hematopoiesis can be impaired due to disease, radiation, or chemotherapy. Inhibition of SHIP has been shown to stimulate hematopoiesis by increasing homing of stem cells to the periphery, and increasing megakaryocyte, granulocyte, neutrophil, and platelet production.

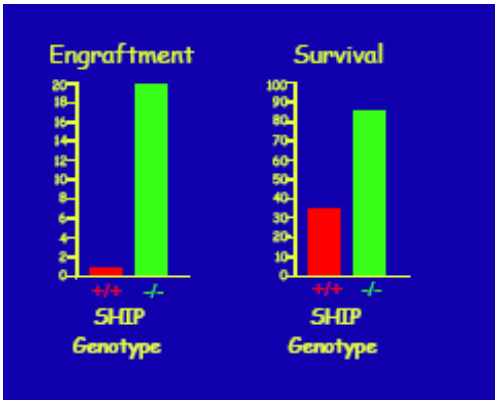
Administration of:
(1) Interfering RNA
(2) Double stranded RNA or DNA
(3) Polynucleotides
(4) Ribozymes

Treatment for:
(1) Allogeneic transplantation of solid organs or bone marrow
(2) Enhancement of stem cell production
(3) Myelosuppression

ADVANTAGES:

- ***In vivo* and *in vitro* preclinical data available**
- **Included use of several nucleotide-based therapeutic categories**
- **Multiple therapeutic applications**

Novel Therapeutic Target



Enhanced Engraftment and Survival in SHIP-Deficient Hosts Following Allogenic Bone Marrow Transplantation

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