



Intellectual Property Office

Umbilical Cord Mesenchymal Stem Cell Therapeutics for Hematologic Disease

Available for Licensing

Technology Reference
R267

Keywords
Therapeutics

Contact
Intellectual Property Office
707 S. Wood St.
Annex Building, Lower Level
Chicago, IL 60612
Phone: (312)-563-2732
Fax: (312) 942-2874
Email: IPO@Rush.edu

Inventor
Dr. Kent Christopherson II
PhD
Assistant Professor of
Medicine and
Immunology/Microbiology

Field
Microbiology

Status
US Patent Pending
Publication **20080118477A1**

PRODUCT

- Stem cell therapy for hematologic transplant patients

ADVANTAGES

- Improved clinical outcomes of patients undergoing hematological transplants
- Enhanced or expedited recovery of the blood or immune system for post transplant patients
- Can be obtained from the same donor as cord blood Hematopoietic Stem Cells which allows the possibility of genetically matched transplant of both Hematopoietic and Mesenchymal Stem Cells as a cellular therapy.

THE TECHNOLOGY

Hematopoietic Stem Cells (HSC) are routinely obtained from bone marrow, mobilized peripheral blood, and umbilical cord blood. Traditionally, bone marrow has been utilized as a source of Mesenchymal Stem Cells (MSC), also known as bone marrow stromal cells. Bone marrow derived MSC have previously been shown to maintain the ex vivo growth of HSC obtained from bone marrow or cord blood and has been utilized for these purposes.

However, the use of genetically mismatched bone marrow derived MSC to support the *ex-vivo* or *in-vivo* long term culture of cord blood HSC is not ideal for transplant purposes.

This invention shows that umbilical cord derived MSC's have the ability to support the long term growth and maintenance of cord blood derived HSC. We propose the use of umbilical cord MSC derived from Wharton's Jelly as a cellular therapeutic in the transplant setting for the treatment of malignant and non-malignant Hematologic diseases, in particular in conjunction with the use of genetically matched umbilical cord blood HSC.

Rush Medical Center University
www.rush.edu/research
Intellectual Property Office