

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3617362

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
THE MANUFACTURERS LIFE INSURANCE COMPANY	11/21/2002
RECEIVING PARTY DATA	
Name:	HEMOSOL INC.
Street Address:	2585 MEADOWPINE BLVD.
City:	MISSISSAUGA
State/Country:	CANADA
Postal Code:	L5N 3H9
PROPERTY NUMBERS Total: 1	
Property Type	Number
Patent Number:	6479637
CORRESPONDENCE DATA	
Fax Number:	(416)361-1398
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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Email:	jlo@bereskinparr.com
Correspondent Name:	BERESKIN & PARR LLP/S.E.N.C.R.L., S.R.L.
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ATTORNEY DOCKET NUMBER:	6704-P12170US01
NAME OF SUBMITTER:	MICHELINE GRAVELLE
SIGNATURE:	/Micheline Gravelle/
DATE SIGNED:	11/16/2015
Total Attachments: 6	
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**SCHEDULE
(US PATENTS/PATENT APPLICATIONS)**

APPLICATION/PATENT NUMBER	TITLE
6361998/US	EFFICIENT CULTURE OF STEM CELLS FOR THE PRODUCTION OF HEMOGLOBIN
09/276686	HEMOGLOBIN-POLYSACCHARIDE CONJUGATES
5770727	CROSS-LINKED HEMOGLOBIN PRODUCT COMPRISING TETRAMERIC AND OLIGOMERIC HEMOGLOBIN UNITS
5532352	SELECTIVE CROSSLINKING OF HEMOGLOBIN BY OXIDIZED RING-OPENED SACCHARIDES
5439591	DISPLACEMENT CHROMATOGRAPHY PROCESS
5545328	PURIFICATION OF HEMOGLOBIN BY DISPLACEMENT CHROMATOGRAPHY
6749637/US	HEMOGLOBIN-HAPTOGLOBIN COMPLEXES
5364932	PASTEURIZABLE FREEZE-DRIABLE HEMOGLOBIN-BASED BLOOD SUBSTITUTE
5189146	PASTEURIZABLE FREEZE-DRIABLE HEMOGLOBIN-BASED BLOOD SUBSTITUTE
4857636	PASTEURIZABLE FREEZE-DRIABLE HEMOGLOBIN-BASED BLOOD SUBSTITUTE
09/238575	DEVELOPMENT OF REGULATORY CELLS AS A MEANS FOR TREATING AUTOIMMUNE DISEASE
09/296402	EFFICIENT EX VIVO EXPANSION OF CD4+ AND CD8+ T-CELL FROM HIV INFECTED SUBJECTS
08/917913	ENHANCED STIMULATION OF ERYTHROPOIESIS
09/807987 and Priority US Provisional Application No. 60/194033	METHODS FOR THE PRODUCTION OF TCR GAMMA DELTA T CELLS
09/926167	HEMOGLOBIN-ANTIOXIDANT CONJUGATES
09/985218 (Continuation of US Application No. 08/917913)	ENHANCED STIMULATION OF ERYTHROPOIESIS
10/231062	HEMOGLOBIN-HAPTOGLOBIN COMPLEXES

MMH/RMD/25065/00/549363.1

RELEASE OF SECURITY INTEREST

(PATENTS)

This RELEASE OF SECURITY INTEREST (Patents)(the "Release") is made and effective as of the date indicated below and is granted by **THE MANUFACTURERS LIFE INSURANCE COMPANY** ("Releasor") of 200 Bloor Street East, NT-6, Toronto, Ontario, M4W 1E5, in favor of **HEMOSOL, INC.** ("Releasee") of 2585 Meadowpine Blvd., Mississauga, Ontario L5N 3H9.

WHEREAS, Releasee holds all right, title and interest in (or is a joint owner or licensee of) certain letter patents, design patents, utility patents and applications including those of the foregoing listed on the annexed Schedule 1A, which patents and patent applications are subsisting in the United States Patent and Trademark Office (collectively, the "Patents");

WHEREAS, Releasor and Releasee have entered into a General Security Agreement dated as of November 24, 2000 (as amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement");

WHEREAS, pursuant to the Security Agreement, Releasee has assigned to Releasor and granted to Releasor a security interest and mortgage in, among other things, all right, title and interest of Releasee in, to and under the Patents and all proceeds thereof, including, without limitation, any and all causes of action that may exist by reason of violation thereof and any and all damages arising from past, present and future violations thereof (the "Collateral"), to secure the payment, performance and observance of the Obligations (as defined in the Security Agreement);

WHEREAS, in connection with the Security Agreement, Releasee has executed that certain Assignment for Security (Patents) executed as of November 24, 2000 (the "Patent Security Grant"), pursuant to which Releasee did convey, sell, assign, transfer and set over unto Releasor and did grant to Releasor a security interest and mortgage in the Collateral to secure the prompt payment, performance and observance of the Obligations;

WHEREAS, Releasee has requested that Releasor release and discharge fully its security interest in and to the Collateral conveyed to Releasor pursuant to the Patent Security Grant, the Security Agreement and/or any other agreement (the "Security Interest"); and

WHEREAS, Releasor is willing to release and discharge fully the Security Interest.

[Remainder of page left blank.]

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Releasor, on behalf of itself, its successors, legal representatives and assigns, hereby releases and discharges fully the Security Interest in and to the Collateral, and all other right, title and interest in and to the Collateral conveyed to Releasor (if any) pursuant to the Patent Security Grant, the Security Agreement and/or any other agreement, and Releasor hereby reassigns any and all such right, title and interest, including any mortgage interest, that it may have in the Collateral (if any) to Releasee. Releasor further agrees to execute and deliver to Releasee any and all further documents or instruments and do any and all further acts which Releasee (or its agents or designees) reasonably request in order to confirm this Release and Releasee's right, title and interest in and to the Collateral.

IN WITNESS WHEREOF, Releasor has caused this Release of Security Interest (Patents) to be duly executed by its officer thereunto duly authorized as of November 21, 2002.

THE MANUFACTURERS LIFE INSURANCE
COMPANY

By: 

Name: William J. Eeuwes

Title:

CERTIFICATE OF ACKNOWLEDGMENT

CITY OF TORONTO

ss.:

PROVINCE OF ONTARIO

On this 21st day of November 2002, before me, the undersigned, personally appeared WILLIAM EEUWES, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.



[NOTARY SEAL]

SCHEDULE 1A

US Patents/Patent Applications

Registration Application Number	or	Short Title
US Patent No. 6194207		Methods For The Selective Expansion of Lymphocytes By In Vitro Cultivation
US Patent No. 6361998/US Application No. 09/339838		Efficient Culture of Stem Cells for the Production of Hemoglobin
US Application No. 09/276686		Hemoglobin- Polysaccharide Conjugates
US Patent No. 5770727		Cross-linked Hemoglobin Product Comprising Tetrameric and Oligomeric Hemoglobin Units
US Patent No. 5532352		Selective Crosslinking of Hemoglobin by Oxidized, Ring-Opened Saccharides
US Patent No. 5439591		Displacement Chromatography Process
US Patent No. 5545328		Purification of Hemoglobin by Displacement Chromatography
US Patent No. 6479637/ US Application No. 09/302351		Hemoglobin-Haptoglobin Complexes

SCHEDULE 1A

US Patents/Patent Applications

Registration Application Number	or	Short Title
US Patent No. 5364932		Pasteurizable Freeze-Driable Hemoglobin-Based Blood Substitute
US Patent No. 5189146		Pasteurizable Freeze-Driable Hemoglobin-Based Blood Substitute
US Patent No. 4857636		Pasteurizable Freeze Driable Hemoglobin Based Blood Substitute

SCHEDULE 1A

US Patents/Patent Applications

Registration Application Number	or	Short Title
US Application No. 09/238575		Development of Regulatory Cells as a Means for Treating Autoimmune Disease
US Application No. 09/296402		Efficient Ex Vivo Expansion of CD4+ and CD8+ T-Cell From HIV Infected Subjects
US Application No. 08/917913		Enhanced Stimulation of Erythropoiesis
US Application No. 09/807987 and Priority US Provisional Application No. 60/194,033		Methods for the Production of TCR Gamma Delta T Cells
US Application No. 09/926167		Hemoglobin-Antioxidant Conjugates
US Application No. 09/985218 (Continuation of US Application No. 08/917913)		Enhanced Stimulation of Erythropoiesis
US Application No. 10/231,062		Hemoglobin-Haptoglobin Complexes