PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
Vital Therapies, Inc., a Delaware Corporation	10/01/2010

RECEIVING PARTY DATA

Name:	ZhenAn Zhang
Street Address:	Long 200, Buidling 2, Room 1702
Internal Address:	Dong Tai Road, Pu Dong District
City:	Shanghai
State/Country:	CHINA
Postal Code:	200120

PROPERTY NUMBERS Total: 4

Property Type	Number
Patent Number:	5290684
Patent Number:	5368555
Patent Number:	7390651
Application Number:	11064566

CORRESPONDENCE DATA

Fax Number: (303)629-7610

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 303-825-0800 Email: IP@bw-legal.com

Correspondent Name: K Kalan

Address Line 1: 370 Seventeenth Street, Suite 4800

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ATTORNEY DOCKET NUMBER: 12510.850

K Kalan

PATENT

REEL: 025319 FRAME: 0217

NAME OF SUBMITTER:

Total Attachments: 4
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PATENT REEL: 025319 FRAME: 0218

MEMORANDUM OF SECURITY AGREEMENT

THIS MEMORANDUM OF SECURITY AGREEMENT (the "Memorandum") is dated as of October 1, 2010, is by and on behalf of Vital Therapies, Inc., a Delaware corporation (together with its successors and assigns, the "Debtor"), whose address is 15222 B Avenue of Science, San Diego, California 92128, in favor of each of the holders listed on Exhibit A attached hereto (collectively, "Lenders") and Ross Jaffe, M.D., in his capacity as Lender Representative (together with the Lenders, the "Secured Party"), on behalf of the Lenders.

RECITALS

- A. Debtor owns the intellectual property described in <u>Exhibit B</u> attached hereto (the "<u>Intellectual Property</u>"). Debtor has previously executed and recorded a security agreement and addendums thereto (collectively the "<u>Security Agreement</u>") regarding the securitization of the Intellectual Property.
- B. Debtor has entered into an addendum to the Security Agreement adding Secured Party as additional secured parties and has agreed to record a memorandum of the Security Agreement adding the Secured Party as additional secured parties under the Security Agreement. This Memorandum is the memorandum to be recorded by Debtor and is being executed, delivered, and recorded by Debtor in furtherance of its agreement.

<u>AGREEMENT</u>

Debtor agrees with Secured Party as follows:

- 1. Debtor grants Secured Party a security interest in the Intellectual Property described on Exhibit B attached hereto, subject to the conditions, provisions, and terms more particularly set forth in the Security Agreement.
- 2. This Memorandum will be binding upon and inure to the benefit of the Parties hereto, their representatives, successors, and assigns.
- 3. This Memorandum will be governed by and construed in accordance with the laws of the State of Colorado.

Debtor:

Vital Therapies, Inc., a Delaware corporation

By:

Its:

Date: 10/28/

-1-

PATENT REEL: 025319 FRAME: 0219

WANCIAC OFFICER

EXHIBIT A

ZhenAn Zhang Long 200, Building 2, Room 1702 Dong Tai Road, Pu Dong District Shanghai, The People's Republic of China 200120.

EXHIBIT B

ATTACHMENT I INTELLECTUAL PROPERTY

Owned patents, trademarks, service marks, and applications therefor:

The following trademarks and service marks:

USPTO approved registration:

 ELAD® Registration No: 2504821; Serial No: 75/183137; good for ten years from 11/16/2007 acceptance date

SAIC China approved registrations:

- Class 10 in English No: 4430817; in Chinese No: 4430821; and combined No: 4430805
- Class 5 English No: 4430816
- Class 11 combined No: 4460780
- Class 20 combined No: 4460781
- Class 35 Chinese No: 4430822; combined No: 4430806
- Class 37 combined No: 4460783
- Class 40 combined No: 4460784
- Class 42 combined No: 4460786
- Class 44 English No: 4430819; Chinese No: 4430823; combined No: 4430807

Singapore approved registration:

- Class 10 English No: T0905808A; good for ten years from 5/27/09 acceptance date

Singapore applications:

- Class 10 application Chinese No: T0909136D
- Classes 5, 40 and 42 combined English and Chinese No: T0909139I
- Class 44 in English No: T0909137B; in Chinese No. T0909138J

PATENT REEL: 025319 FRAME: 0221

2. The following patents and patent applications:

Patent	"Permanent Human Hepatocyte Cell Line And Its Use In A Liver Assist Device (LAD)"
Date of Patent	March 1, 1994 (U.S.)
Patent#	5,290,684
Countries	United States, Europe, Japan, Australia
Brief Description	Relates to permanent cell lines of hepatocytes with liver functions and methods of their use, particularly the use of the cell line in liver assist devices and in studying metabolism and regulation of liver cells.
Patent	"Organ Support System"
Date of Patent	November 29, 1994 (U.S.)
Patent #	5,368,355
Brief Description	Relates to an organ support system and method for sustaining a patient, and more particularly to an organ support system having a cell line which mimics or supports the function of a specific bodily organ e.g., liver, kidney, etc.
Patent	"C3A Serum-Free Clonal Cell Line and Methods of Use"
Date of Patent	June 24, 2008 (U.S.)
Patent #	7,390,651
Brief Description	Relates to a clone of the C3A cell line that will grow in serum free medium. This will allow production of ELAD* cartridges without the need for calf serum in the tissue culture medium.
Patent	"Metabolic Detexification System and Method"
Date of Filing	April 26, 2004 (U.S. and Worldwide, including China)
Patent #	Pending: US Application 20050236329
Brief Description	Relates to an advanced metabolic detoxification and support system and method for sustaining a patient, and specifically to a system having the C3A cell line.
Patent	"Immortal Non-Tumorigenic Human Hepatocyte Cell Line"
Date of Patent	Claims and Specification Drafted
Patent	"Up Regulation of Detuxification Activities of Hepatocyte Based Liver Assist Systems"
Date of Patent	Claims and Specification Drafted