

**TRADEMARK ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

**CONVEYING PARTY DATA**

Name	Formerly	Execution Date	Entity Type
Vital Therapies, Inc.		04/29/2010	CORPORATION: DELAWARE

**RECEIVING PARTY DATA**

Name:	Steven J. Pfrenzinger
Street Address:	73-987 Desert Garden Trail
City:	Palm Desert
State/Country:	CALIFORNIA
Postal Code:	92260
Entity Type:	INDIVIDUAL: UNITED STATES

Name:	Christine Pfrenzinger-Julianel
Street Address:	73-987 Desert Garden Trail
City:	Palm Desert
State/Country:	CALIFORNIA
Postal Code:	92260
Entity Type:	INDIVIDUAL: UNITED STATES

Name:	Frank Kung
Street Address:	Vivo Ventures, 575 High Street, Suite 201
City:	Palo Alto
State/Country:	CALIFORNIA
Postal Code:	94301
Entity Type:	INDIVIDUAL: UNITED STATES

Name:	John S. and Elizabeth H. Lewis Family Partnership LP
Street Address:	c/o John R. Lewis, P. O. Box 1691
City:	San Mateo
State/Country:	CALIFORNIA
Postal Code:	94401

CH \$40.00 2504821

**900161670**

**TRADEMARK  
 REEL: 004201 FRAME: 0646**

Entity Type: LIMITED PARTNERSHIP: CALIFORNIA

PROPERTY NUMBERS Total: 1

Property Type	Number	Word Mark
Registration Number:	2504821	ELAD

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: kkalan@bw-legal.com  
Correspondent Name: K Kalan  
Address Line 1: Berenbaum Weinshienk PC, 370 17th Street  
Address Line 2: Suite 4800  
Address Line 4: Denver, COLORADO 80202

ATTORNEY DOCKET NUMBER:	12510.850
NAME OF SUBMITTER:	K Kalan
Signature:	/kkalan/
Date:	05/07/2010

Total Attachments: 4  
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MEMORANDUM OF SECURITY AGREEMENT

THIS MEMORANDUM OF SECURITY AGREEMENT (the "Memorandum") is dated as of April 29, 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 Exhibit B attached hereto (the "Intellectual Property"). Debtor has previously executed and recorded a security agreement and addendums thereto (collectively the "Security Agreement") 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.

AGREEMENT

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: [Signature]
Its: C.E.O AND SECRETARY
Date: APRIL 29, 2010

**EXHIBIT A**

Steven J. Pfrenzinger and Christine Pfrenzinger-Julianel  
73-987 Desert Garden Trail  
Palm Desert, CA 92260

Frank Kung  
Vivo Ventures  
575 High Street, Suite 201  
Palo Alto, CA 94301

John S. and Elizabeth H. Lewis Family Partnership LP  
c/o John R. Lewis  
P. O. Box 1691  
San Mateo, CA 94401

## EXHIBIT B

### ATTACHMENT 1 INTELLECTUAL PROPERTY

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

I. The following trademarks and service marks:

USPTO approved registration:

- ELAD<sup>®</sup> 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

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 #	5,368,555
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 Detoxification 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 Detoxification Activities of Hepatocyte Based Liver Assist Systems"
Date of Patent	Claims and Specification Drafted