

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Harvey FRIEDMAN</td> <td>01/03/2012</td> </tr> <tr> <td>Elizabeth E. ZUMBRUN</td> <td>05/02/2012</td> </tr> <tr> <td>Fushan WANG</td> <td>05/29/2012</td> </tr> </tbody> </table>		Name	Execution Date	Harvey FRIEDMAN	01/03/2012	Elizabeth E. ZUMBRUN	05/02/2012	Fushan WANG	05/29/2012				
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RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA</td> </tr> <tr> <td>Street Address:</td> <td>3160 Chestnut Street</td> </tr> <tr> <td>Internal Address:</td> <td>Suite 200</td> </tr> <tr> <td>City:</td> <td>Philadelphia</td> </tr> <tr> <td>State/Country:</td> <td>PENNSYLVANIA</td> </tr> <tr> <td>Postal Code:</td> <td>19104-6283</td> </tr> </table>		Name:	THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA	Street Address:	3160 Chestnut Street	Internal Address:	Suite 200	City:	Philadelphia	State/Country:	PENNSYLVANIA	Postal Code:	19104-6283
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PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13260835</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13260835								
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CORRESPONDENCE DATA													
<p>Fax Number: (646)878-0801 Phone: 646-878-0800 Email: USPTO@pczlaw.com</p> <p><i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i></p> <p>Correspondent Name: Pearl Cohen Zedek Latzer, LLP Address Line 1: 1500 Broadway Address Line 2: 12th Floor Address Line 4: New York, NEW YORK 10036</p>													
ATTORNEY DOCKET NUMBER:	P-9066-US3												
NAME OF SUBMITTER:	Andrea Richter												

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Total Attachments: 9

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ASSIGNMENT

In exchange for valuable consideration, and other good and valuable consideration, the Receipt of which is hereby acknowledged, I the undersigned, FRIEDMAN, Harvey M. residing at 310 Winding Way, Merion PA 19066; BRITTLE, Elizabeth E. residing at 4206 Garnet Drive, Middletown, MD 21769; WANG, Fushan residing at 2520 Gilbert Street, Broomall, PA 19008,

Hereby sell, assign and transfer to The Trustees of the University of Pennsylvania, located at 3160 Chestnut Street- Suite 200, Philadelphia, PA 19104-6283 its successors, assigns and legal representatives (hereinafter, the "Assignee"), the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and as possessed by the undersigned, any and all inventions which are disclosed but not claimed in the application for United States Application No. 13/260,835, filed September 28, 2011, which is a National Phase Application of PCT International Application No. PCT/US10/29493, PCT International filing date March 31, 2010 and is entitled:

HSV-1 AND HSV-2 VACCINES AND METHODS OF USE THEREOF

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions. I hereby authorize and request the attorney of record of the firm Pearl Cohen Zedek Latzer, LLP, 1500 Broadway, 12th Floor, New York, New York 10036, to insert in the parentheses above, the filing date and US Serial No. of said application when known;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its

successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the under-signed or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

COVENANT with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

COVENANT with said Assignee, its successors, assigns and legal representatives that A written release or promise hereafter made and signed by the person releasing or promising, shall not be invalid or unenforceable for lack of consideration, if the writing also contains an additional express statement, in any form of language, that the signer intends to be legally bound.

(month / day / year)

Harvey M. Friedman
FRIEDMAN, Harvey M.

STATE OF: PENNSYLVANIA:
: ss.
COUNTY OF: PHILADELPHIA

Before me, a notary public in and for the State and County aforesaid, on this 3RD day of JANUARY, 2011, personally appeared **FRIEDMAN, Harvey M.**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Susan Giangrasso
Notary Public

My Commission Expires: **COMMONWEALTH OF PENNSYLVANIA**

NOTARIAL SEAL
SUSAN GIAGRASSO, Notary Public
City of Philadelphia, Phila. County
My Commission Expires May 12, 2013

(month / day / year)

BRITTLE, Elizabeth E.

STATE OF: _____ :
: ss.
COUNTY OF: _____ :

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **BRITTLE, Elizabeth E.**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Notary Public

My Commission Expires:

(month / day / year)

Wang, Fushan

STATE OF: _____ :
: ss.
COUNTY OF: _____ :

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **Wang, Fushan**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Notary Public

My Commission Expires:

ASSIGNMENT

In exchange for valuable consideration, and other good and valuable consideration, the Receipt of which is hereby acknowledged, I the undersigned, FRIEDMAN, Harvey M. residing at 310 Winding Way, Merion PA 19066; ZUMBRUN, Elizabeth E. residing at 4206 Garnet Drive, Middletown, MD 21769; WANG, Fushan residing at 2520 Gilbert Street, Broomall, PA 19008,

Hereby sell, assign and transfer to The Trustees of the University of Pennsylvania, located at 3160 Chestnut Street- Suite 200, Philadelphia, PA 19104-6283 its successors, assigns and legal representatives (hereinafter, the "Assignee"), the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and as possessed by the undersigned, any and all inventions which are disclosed but not claimed in the application for United States Application No. 13/260,835, filed September 28, 2011, which is a National Phase Application of PCT International Application No. PCT/US10/29493, PCT International filing date March 31, 2010 and is entitled:

HSV-1 AND HSV-2 VACCINES AND METHODS OF USE THEREOF

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions. I hereby authorize and request the attorney of record of the firm Pearl Cohen Zedek Latzer, LLP, 1500 Broadway, 12th Floor, New York, New York 10036, to insert in the parentheses above, the filing date and US Serial No. of said application when known;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its

successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the under-signed or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

COVENANT with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

COVENANT with said Assignee, its successors, assigns and legal representatives that A written release or promise hereafter made and signed by the person releasing or promising, shall not be invalid or unenforceable for lack of consideration, if the writing also contains an additional express statement, in any form of language, that the signer intends to be legally bound.

(month / day / year)

FRIEDMAN, Harvey M.

STATE OF: _____:
: ss.
COUNTY OF: _____:

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **FRIEDMAN, Harvey M.**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Notary Public

My Commission Expires:

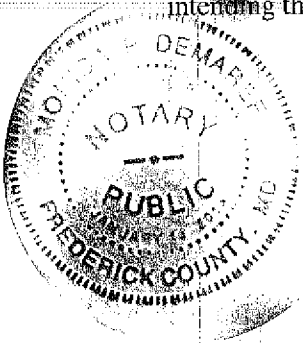
05/02/2012

(month / day / year)

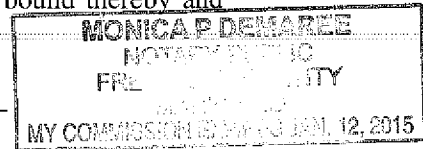
Elizabeth E. Zumbun
ZUMBRUN, Elizabeth E.

STATE OF: Maryland :
 COUNTY OF: Frederick : ss.

Before me, a notary public in and for the State and County aforesaid, on this 02nd day of May, 2012, personally appeared **ZUMBRUN, Elizabeth E.**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.



Monica P. Demaree
 Notary Public



My Commission Expires: Jan 12th, 2015

(month / day / year)

Wang, Fushan

STATE OF: _____ :
 : ss.
 COUNTY OF: _____ :

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **Wang, Fushan**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

 Notary Public

My Commission Expires:

ASSIGNMENT

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Hereby sell, assign and transfer to The Trustees of the University of Pennsylvania, located at 3160 Chestnut Street- Suite 200, Philadelphia, PA 19104-6283 its successors, assigns and legal representatives (hereinafter, the "Assignee"), the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and as possessed by the undersigned, any and all inventions which are disclosed but not claimed in the application for United States Application No. 13/260,835, filed September 28, 2011, which is a National Phase Application of PCT International Application No. PCT/US10/29493, PCT International filing date March 31, 2010 and is entitled:

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COVENANT with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

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(month / day / year)

FRIEDMAN, Harvey

STATE OF: _____;
: ss.
COUNTY OF: _____;

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **FRIEDMAN, Harvey**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

Notary Public

My Commission Expires:

BRITTLE, Elizabeth E.

SS.

Before me, a notary public in and for the State and County aforesaid, on this _____ day of _____, 2011, personally appeared **BRITTLE, Elizabeth E.**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

My Commission Expires: _____

Wang, Fushan

SS.

Before me, a notary public in and for the State and County aforesaid, on this 24th day of May, 2011, personally appeared **Wang, Fushan**, who being to me personally known, and who having first executed the foregoing instrument in my presence and having been by me first duly sworn, did acknowledge the foregoing instrument as his free deed and act, signed, sealed and delivered by him for the purpose therein stated and intending to be legally bound thereby and intending that said instrument be recorded.

My Commission Expires: Aug. 29, 2018

