Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Patrick Duffy | 05/07/2008 |
| Urszula Krzych | 05/08/2008 |
| Donald G. Heppner | 05/08/2008 |
| lgor Bacik | 05/07/2008 |

RECEIVING PARTY DATA

| IIName. | The United States of America, as Represented by the Secretary of the Army, on Behalf of the Walter Reed Army Institute of Research | |
|-----------------|--|--|
| Street Address: | 504 Scott Street | |
| City: | Fort Detrick | |
| State/Country: | MARYLAND | |
| Postal Code: | 21702-5012 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12088065 |

CORRESPONDENCE DATA

Fax Number: (206)224-0779

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

Phone: (206)682-8100

Email: efiling@cojk.com

Correspondent Name: Dennis K. Shelton, Esq.

Address Line 1: Christensen O'Connor Johnson Kindness

Address Line 2: 1420 Fifth Avenue, Suite 2800
Address Line 4: Seattle, WASHINGTON 98101-2347

ATTORNEY DOCKET NUMBER: SBWRDU131050

NAME OF SUBMITTER: Dennis K. Shelton

PATENT REEL: 021390 FRAME: 0381

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Total Attachments: 5

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> PATENT REEL: 021390 FRAME: 0382

Attorney Docket No. SBWRDU131050

ASSIGNMENT

WHEREAS, we, Patrick Duffy, residing at 2912 First Avenue West, Seattle, Washington 98119; Urszula Krzych, residing at 3058 Porter Street NW, Washington, DC 20008; Donald G. Heppner, Jr., residing at 9441 Brenner Court, Vienna, Virginia 22180-3402; and Igor Bacik, residing at 12907 Cookston Lane, Rockville, Maryland 20851, are inventors named in an application for Letters Patent of the United States entitled PLASMODIUM LIVER STAGE ANTIGENS, the specification of which was filed on September 29, 2006, as International Application No. PCT/US2006/037851 (now U.S. Application No. 12/088,065);

AND, WHEREAS, The United States of America, as Represented by the Secretary of the Army, on Behalf of the Walter Reed Army Institute of Research, having a principal place of business at the Office of the Staff Judge Advocate, U.S. Army Medical Research & Material Command, 504 Scott Street, Fort Detrick, Maryland 21702-5012 (hereinafter referred to as ASSIGNEE), is desirous of acquiring our entire right and title to and interest in our invention disclosed in said application;

NOW, THEREFORE, for sufficient, good, and valuable consideration, the receipt of which is hereby acknowledged, we do hereby sell, assign, and transfer unto ASSIGNEE our entire right and title to and interest in said application and said invention, including the right to apply for international patents and patents thereon in foreign countries in our name or in the name of ASSIGNEE, said invention and all applications and patents on said invention to be held and enjoyed by ASSIGNEE as entirely as the same would have been held and enjoyed by us had this sale, assignment, and transfer not been made; and we do hereby further agree and promise to execute all instruments and render all such assistance as ASSIGNEE may request in order to make and prosecute any and all applications on said invention, to enforce any and all patents on said invention, and to confirm in ASSIGNEE legal title to said invention and all applications and patents on said invention, all without charge to ASSIGNEE but at no expense to us.

| Executed at Seaft of 2008. | (city), | Washington, | this | 7 th | _ day of |
|----------------------------|------------|-------------|--------------|-------|--------------|
| | | Patrick Duf | <i>lok</i> ≪ | left) | |
| STATE OF WASHINGTON |) | | | | |
| COUNTY OF FING |) ss.) | | | | |

I certify that I know or have satisfactory evidence that Patrick Duffy is the person who appeared before me, and said person acknowledged that he signed this instrument and

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-1-

| (Seal or starte) | Signature | £ E | |
|---|--------------------------------------|---|------------|
| OF WASHINGS | Printed Na Notary Pu My appoir | ame: KARGN BCO blic atment expires 08-16- | 10 |
| ********** | ******** | ************************ | **** |
| Executed at, 2008. | (city), | (state), this | day |
| of, 2008. | · · | | |
| | | | |
| | Ur | szula Krzych | |
| STATE OF: |) | | |
| |) ss. | | |
| COUNTY OF | | | |
| appeared before me, and said | id person acknowledge | - | rument and |
| ~ | | | |
| instrument. | | | |
| instrument. Dated: | Signature | | · |
| acknowledged it to be her fre instrument. Dated: | Signature Notary Pu | | · |
| instrument. Dated: | Signature Notary Pu | blic ntment expires | |
| instrument. Dated: | Signature Notary Pu | | |

acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the

SBWRDU\31050121.DOC

instrument.

-2-

PATENT REEL: 021390 FRAME: 0384

ASSIGNMENT OF INVENTION

Title of Invention: PLASMODIUM LIVER STAGE ANTIGENS

Inventors: PATRICK DUFFY; STEFAN H. I. KAPPE; URSZULA KRZYCH; DONALD G. HEPPNER;

LAWRENCE W. BERGMAN; VLADISLAV A. MALKOV; ALICE TARUN; JASON W.

WENDLER; IGOR BACIK

Dates Oath Executed:

Application Serial Nos.: U.S. 12/088,065 and International Application Number PCT/US2006/037851 filed 09/29/2006

We, the undersigned inventors, in consideration of the rights of the Government of the United States acquired by virtue of the circumstances under which the above-entitled invention was made, hereby:

- 1. Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title, and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent all Letters Patent issuing thereon, and any continuation, continuation-in-part, or division of said application and any reissue of extension of said Letters Patent.
- 2. Assign to the Government all right, title, and interest in the invention in those foreign countries in which the Government determines to cause an application to be filed, including but not limited to Australia, Canada, Mexico, Japan and the countries of the European Union.
- 3. Agree to provide any further information within our knowledge and to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution of interference's, and recording of title of patent applications and patents issuing thereon.

| Inventor's Signature: | |
|-----------------------|--|
| Date: 05)08/08 | Typed Name of Inventor: URSZULA KRZYCH |
| STATE OF Mauy land | · |
| COUNTY OF MONTGOMERY | <u>′</u> |

On the above date URSZULA KRZYCH known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed.

(SEAL)

My Commission expires on 27-MAY-2608.

ASSIGNMENT OF INVENTION

Title of Invention: PLASMODIUM LIVER STAGE ANTIGENS

Inventors: PATRICK DUFFY; STEFAN H. I. KAPPE; URSZULA KRZYCH; DONALD G. HEPPNER;

LAWRENCE W. BERGMAN; VLADISLAV A. MALKOV; ALICE TARUN; JASON W.

WENDLER; IGOR BACIK

Dates Oath Executed:

Application Serial Nos.: U.S. 12/088,065 and International Application Number PCT/US2006/037851 filed 09/29/2006

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- 3. Agree to provide any further information within our knowledge and to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution of interference's, and recording of title of patent applications and patents issuing thereon.

| Inventor's Signature: Doubly | Thumes |
|---|---|
| Date: 8 MB4 2008 | Typed Name of Inventor: DONALD G. HEPPNER |
| STATE OF Mareland | |
| STATE OF <u>Maryland</u> COUNTY OF <u>Montgomery</u> | <u>/</u> |

On the above date DONALD G. HEPPNER known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed.

(SEAL)

My Commission expires on 27-m44-2008.

Parti da la Larrey.

ASSIGNMENT OF INVENTION

Title of Invention: PLASMODIUM LIVER STAGE ANTIGENS

Inventors: PATRICK DUFFY; STEFAN H. I. KAPPE; URSZULA KRZYCH; DONALD G. HEPPNER;

LAWRENCE W. BERGMAN; VLADISLAV A. MALKOV; ALICE TARUN; JASON W.

WENDLER; IGOR BACIK

Dates Oath Executed:

Application Serial Nos.: U.S. 12/088,065 and International Application Number PCT/US2006/037851 filed 09/29/2006

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- 2. Assign to the Government all right, title, and interest in the invention in those foreign countries in which the Government determines to cause an application to be filed, including but not limited to Australia, Canada, Mexico, Japan and the countries of the European Union.
- 3. Agree to provide any further information within our knowledge and to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution of interference's, and recording of title of patent applications and patents issuing thereon.

| Inventor's Signature: |
|---|
| Date: 5/7/2007 Typed Name of Inventor: IGOR BACIK |
| STATE OF Complete |
| COUNTY OF Montgomery |
| On the above date IGOR BACIK known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed. |
| (SEAL) |
| My Commission expires on |

PATENT REEL: 021390 FRAME: 0387

My Commission Expires July 14, 2008

RECORDED: 08/14/2008