502162778 12/14/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Marvin J. Grubman | 12/04/2012 |

RECEIVING PARTY DATA

| Name: | United States of America as Represented by the Secretary of Agriculture |
|-----------------|---|
| Street Address: | USDA |
| City: | Washington |
| State/Country: | DISTRICT OF COLUMBIA |
| Postal Code: | 20250 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12117513 |

CORRESPONDENCE DATA

Fax Number: 3015045060

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

Phone: 301-504-4781

Email: Evelyn.Rabin@ars.usda.gov

Correspondent Name: Evelyn M. Rabin

Address Line 1: 5601 Sunnyside Avenue

Address Line 2: Rm. 4-1159

Address Line 4: Beltsville, MARYLAND 20705

| ATTORNEY DOCKET NUMBER: 0036. | .13 |
|-------------------------------|-----|
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NAME OF SUBMITTER: Evelyn M. Rabin

Total Attachments: 4

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REEL: 029468 FRAME: 0273

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| RECORDATION FORM COVER SHEET | | | | |
|--|--|--|--|--|
| PATENTS ONLY | | | | |
| To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below. | | | | |
| 1. Name of conveying party(ies) | 2. Name and address of receiving party(ies) | | | |
| | Name: United States of America as Represented by the Secretary of Agriculture | | | |
| Marvin J. Grubman | Internal Address: | | | |
| Additional name(s) of conveying party(ies) attached? Yes No 3. Nature of conveyance/Execution Date(s): Execution Date(s) 12/4/12 | Street Address: | | | |
| Assignment Merger | | | | |
| | City: Washington, DC | | | |
| Security Agreement | | | | |
| Joint Research Agreement Government Interest Assignment | State: | | | |
| Executive Order 9424, Confirmatory License | Country: US Zip: 20250 | | | |
| Other | Additional name(a) & address(as) attached? | | | |
| | Additional name(s) & address(es) attached? Yes Nodocument serves as an Oath/Declaration (37 CFR 1.63). | | | |
| A. Patent Application No.(s) | B. Patent No.(s) | | | |
| 12/117,513 Additional numbers att | ached? Yes ■ No | | | |
| 5. Name and address to whom correspondence | 6. Total number of applications and patents | | | |
| concerning document should be mailed: | involved: 1 | | | |
| Name: Evelyn M. Rabin | 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00 | | | |
| Internal Address: USDA-ARS-OTT | | | | |
| | Authorized to be charged to deposit account | | | |
| Street Address: 5601 Sunnyside Ave. Rm. 4-1159 | Enclosed | | | |
| | None required (government interest not affecting title) | | | |
| City: Beltsville | 8. Payment Information | | | |
| State: MD Zip: 20705 | | | | |
| Phone Number: 301-504-4781 | E00104 | | | |
| Docket Number: 0036.13 | Deposit Account Number 502134 | | | |
| Email Address:_Evelyn.Rabin@ars.usda.gov | Authorized User Name Evelyn M. Rabin | | | |
| 9. Signature: /Evelyn M. Rabin/ | 2012-12-14 | | | |
| Signature | Date | | | |
| Evelyn M. Rabin Name of Person Signing | Total number of pages including cover sheet, attachments, and documents: | | | |
| Documents to be recorded (including cover sheet |) should be faxed to (571) 273-0140, or mailed to: the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450 | | | |

PATENT

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Guidelines for Completing Patents Cover Sheets (PTO-1595)

Cover Sheet information must be submitted with each document to be recorded. If the document to be recorded concerns both patents and trademarks separate patent and trademark cover sheets, including any attached pages for continuing information, must accompany the document. All pages of the cover sheet should be numbered consecutively, for example, if both a patent and trademark cover sheet is used, and information is continued on one additional page for both patents and trademarks, the pages of the cover sheet would be numbered from 1 to 4.

Item 1. Name of Conveying Party(ies).

Enter the full name of the party(ies) conveying the interest. If there is insufficient space, enter a check mark in the "Yes" box to indicate that additional information is attached. The name of the additional conveying party(ies) should be placed on an attached page clearly identified as a continuation of the information Item 1. Enter a check mark in the "No" box, if no information is contained on an attached page. If the document to be recorded is a joint research agreement, enter the name(s) of the party(ies) other than the owner of the patent or patent application as the conveying party(ies).

Item 2. Name and Address of Receiving Party(ies).

Enter the name and full address of the first party receiving the interest. If there is more than one party receiving the interest, enter a check mark in the "Yes" box to indicate that additional information is attached. Enter a check mark in the "No" box, if no information is contained on an attached page. If the document to be recorded is a joint research agreement, enter the name(s) of the patent or patent application owner(s) as the receiving party.

Item 3. Nature of Conveyance/Execution Date(s).

Enter the execution date(s) of the document. It is preferable to use the name of the month, or an abbreviation of that name, in order that confusion over dates is minimized. Place a check mark in the appropriate box describing the nature of the conveying document. If the "Other" box is checked, specify the nature of the conveyance.

Item 4. Application Number(s) or Patent Number(s).

Indicate the application number(s), and/or patent number(s) against which the document is to be recorded. National application numbers must include both the series code and a six-digit number (e.g., 07/123,456), and international application numbers must be complete (e.g., PCT/US91/12345).

Enter a check mark in the appropriate box: "Yes" or "No" if additional numbers appear on attached pages. Be sure to identify numbers included on attached pages as the continuation of Item 4. Also enter a check mark if this Assignment is being filed as an Oath/Declaration (37 CFR 1.63).

Item 5. Name and Address of Party to whom correspondence concerning the document should be

mailed. Enter the name and full address of the party to whom correspondence is to be mailed.

Item 6. Total Applications and Patents involved.

Enter the total number of applications and patents identified for recordation. Be sure to include all applications and patents identified on the cover sheet and on additional pages.

Block 7. Total Fee Enclosed.

Enter the total fee enclosed or authorized to be charged. A fee is required for each application and patent against which the document is recorded.

Item 8. Payment Information.

Enter the deposit account number and authorized user name to authorize charges.

Item 9. Signature.

Enter the name of the person submitting the document. The submitter must sign and date the cover sheet. Enter the total number of pages including the cover sheet, attachments, and document.

This collection of information is required by 35 USC 261 and 262 and 15 USC 1057 and 1060. The information is used by the public to submit (and by the USPTO to process) patent and trademark assignment requests. After the USPTO records the information, the records for patent and trademarks, assignments, and other associated documents can be inspected by the public. To view documents recorded under secrecy orders or documents recorded due to the interest of the federal government, a written authorization must be submitted. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the form to the USPTO. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Manager of the Assignment Division, USPTO, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450.

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Privacy Act Statement for Patent Assignment Recordation Form Cover Sheet

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with the above request for information. This collection of information is authorized by 35 U.S.C. 1, 2, 261 and E.O. 9424. This information will primarily be used by the USPTO for the recordation of assignments related to patents and patent applications. Submission of this information is voluntary but is required in order for the USPTO to record the requested assignment. If you do not provide the information required on the cover sheet, the assignment will not be recorded, and all documents will be returned to you.

After the information is recorded, the records and associated documents can be inspected by the public and are not confidential, except for documents that are sealed under secrecy orders or related to unpublished patent applications. Assignment records relating to unpublished patent applications are maintained in confidence in accordance with 35 U.S.C. 122. Records open to the public are searched by users for the purpose of determining ownership for other property rights with respect to patents and trademarks.

Routine uses of the information you provide may also include disclosure to appropriate Federal, state, local, or foreign agencies in support of their enforcement duties and statutory or regulatory missions, including investigating potential violations of law or contract and awarding contracts or other benefits; to a court, magistrate, or administrative tribunal in the course of presenting evidence; to members of Congress responding to requests for assistance from their constituents; to the Office of Management and Budget in connection with the review of private relief legislation; to the Department of Justice in connection with a Freedom of Information Act request; to a contractor in the performance of their duties; to the Office of Personnel Management for personnel studies; and to the General Services Administration (GSA) as part of their records management responsibilities under the authority of 44 U.S.C. 2904 and 2906. Such disclosure to GSA shall not be used to make determinations about individuals.

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<u>ASSIGNMENT</u>

| WHEREAS, I (we), <u>Marvin J. Grubman</u> |
|---|
| residing at P.O. Box 1483 Southold, NY 11971 |
| having invented an improvement in <u>Adenoviral Vector-Based Foot-and-Mouth Disease Vaccine</u> |
| for which I (we) have made application for Letters Patent of the United States, identified as Department of Agriculture Case No. <u>0036.13</u> (; S.N. 12/117,513 filed on 05/08/08). |
| WHEREAS, the WORLDWIDE patent rights in my (our) share of said invention are assignable to the United States by virtue of my (our) having made the invention while in the employ of the United States Department of Agriculture under applicable law and regulations of the United States Department of Agriculture which render the patent rights so assignable; and |
| WHEREAS, the United States, as represented by the Secretary of Agriculture, is desirous of acquiring an assignment of said patent rights; |
| NOW, THEREFORE, in consideration of these premises, I (we) hereby assign said WORLDWIDE patent rights to the United States of America, as represented by the Secretary of Agriculture. |
| Nonin J. Shuban 12(4/12 |
| Marvin J. Grubman (date) |

USDA Rev. 9/00

> PATENT REEL: 029468 FRAME: 0277

RECORDED: 12/14/2012