

## PATENT ASSIGNMENT

Electronic Version v1.1  
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|--|-----------------------------------|
| SUBMISSION TYPE:   | NEW ASSIGNMENT                    |
| NATURE OF CONVEYANCE:  | ASSIGNMENT                        |
| CONVEYING PARTY DATA   |                                   |
| Name   | Execution Date                    |
| NOVARTIS VACCINES AND DIAGNOSTICS SRL  | 12/21/2010                        |
| RECEIVING PARTY DATA   |                                   |
| Name:  | NOVARTIS AG                       |
| Street Address:  | LICHTSTRASSE 35                   |
| City:  | BASEL                             |
| State/Country:   | SWITZERLAND                       |
| Postal Code:   | 4056                              |
| PROPERTY NUMBERS Total: 1  |                                   |
| Property Type  | Number                            |
| Application Number:  | 13556139                          |
| CORRESPONDENCE DATA  |                                   |
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| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>   |                                   |
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| ATTORNEY DOCKET NUMBER:  | PAT051665-US-PCTD                 |
| NAME OF SUBMITTER:   | Felicia Soria                     |
| Total Attachments: 3<br>source=Signed-Asg-NVDSRL-toNAG-51665-US-PCTD#page1.tif<br>source=Signed-Asg-NVDSRL-toNAG-51665-US-PCTD#page2.tif<br>source=Signed-Asg-NVDSRL-toNAG-51665-US-PCTD#page3.tif |                                   |

CH \$40.00 13556139

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

Atty Docket No.: PAT051665-US-PCTD

To the Director of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

NOVARTIS VACCINES AND DIAGNOSTICS SRL  
Via Fiorentina, 1  
I-53100 Siena  
IT

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name:

NOVARTIS AG  
Lichtstrasse 35  
4056 Basel  
SWITZERLAND

☐ Other

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement ☐ Other \_\_\_\_\_  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License

Execution Date(s): 12/21/2010

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_.

A. Patent Application No.(s)

13/556,139

B. Patent No.(s)

Additional number(s) attached ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

NOVARTIS VACCINES AND DIAGNOSTICS, INC.  
Corporate Intellectual Property - X 100B  
P.O. Box 8097  
Emeryville, CA 94662-8097  
US

6. Total number of applications and patents involved 1

7. Total fee (37 CFR 3.41)..... \$40.00

☐ Enclosed

☒ Authorized to be charged to deposit account,

8. Deposit account number: **03-1664**

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Amy Hessler, Reg. No. 50,310

Name of Person Signing



Signature

11/26/12

Date

Total number of pages including cover sheet, attachments, and document: 3

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450

## ASSIGNMENT OF PATENT APPLICATION

Whereas NOVARTIS VACCINES AND DIAGNOSTICS SRL, with a place of business at Via Fiorentina 1, I-53100, Siena, Italy, ("ASSIGNOR") and Novartis AG, a corporation of Switzerland having a place of business at Lichtstrasse 35, 4056 Basel, Switzerland, ("ASSIGNEE") have agreed that ASSIGNEE shall acquire from ASSIGNOR the following patents and/or patent applications ("PATENT PROPERTIES"):

| <u>Patent No.</u> | <u>Application No.</u> | <u>Filing Date</u> | <u>Issue Date</u> |
|-------------------|------------------------|--------------------|-------------------|
|                   | GB 0524066.8           | November 25, 2005  |                   |
|                   | PCT/IB2006/003876      | November 27, 2006  |                   |
|                   | US 12/085,413          | November 27, 2006  |                   |

Therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR, the owner of the entire right, title, and interest in the PATENT PROPERTIES, hereby sells, assigns, transfers and conveys to ASSIGNEE, its designees, successors, assigns and legal representatives, the entire right, title and interest in the PATENT PROPERTIES and all divisions, continuations, reissues and reexaminations thereof, the inventions therein, and all rights to claim priority from the PATENT PROPERTIES and all applications for patent that may be filed for the inventions in any foreign country and all patents that may be granted on the inventions in any foreign country, and all extensions, renewals, and reissues thereof; each and every of the foregoing rights, titles and interests herein assigned shall be held and enjoyed by ASSIGNEE, its successors, assigns and legal representatives, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this Assignment not been made. This Assignment is effective as from the earliest priority date as stated above.

IN TESTIMONY WHEREOF, Assignor has caused this Assignment to be duly executed in its name and behalf by affixing its hand and seal thereto by its designated officer, director, or agent, whose name and title appear below.

Executed at Siena, Italy this 21 day of December, 2010.

Novartis Vaccines & Diagnostics SRL



Signature

Name:

***Richard Pitman, PhD***

Title:

Chartered Patent Attorney  
European Patent Attorney  
Site Head Intellectual Property, Siena  
Novartis Vaccines & Diagnostics Srl  
Via Fiorentina, 1 - 53100 - Siena (IT)