PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: **ASSIGNMENT**

CONVEYING PARTY DATA

Name	Execution Date
NOVARTIS VACCINES AND DIAGNOSTICS, INC.	06/23/2009

RECEIVING PARTY DATA

Name:	NOVARTIS AG
Street Address:	Lichtstrasse 35
City:	Basel
State/Country:	SWEDEN
Postal Code:	4056

PROPERTY NUMBERS Total: 2

Property Type	Number	
Application Number:	60785545	
PCT Number:	US0764858	

CORRESPONDENCE DATA

Fax Number: (510)923-3542

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

Phone: (510)923-2192

Email: kara.shure@novartis.com

Correspondent Name: Helen Lee

Address Line 1: 4560 Horton Street

Address Line 2: Corporate Intellectual Property - X100B Emeryville, CALIFORNIA 94662-8097 Address Line 4:

ATTORNEY DOCKET NUMBER: 52047-US-PCT

NAME OF SUBMITTER: Kara Shure

Total Attachments: 4

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(E) APIAN	ATION FORM COVER SHEET ATENTS ONLY	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
OND 10. 000 Oct. (0Ap. 0.00.2000)		PP028232.0003
To the Director of Patents and Trademark	ks: Please record the attached original	documents or copy thereof.
Name of conveying party(ies): NOVARTIS VACCINES AND DIAGNOSTICS	Name and address of Name: Name:	
Additional name(s) of conveying party(ies) attached?	NOVARTIS AG Lichtstrasse 35 4056 Basel	
Nature of conveyance:		
	l l	
Executive Order 9424, Confirmatory License	☐ Other	
Execution Date(s): June 23, 2009	Additional name(s) &	address(es) attached? ☐ Yes ☒ No
Application number(s) or patent number(s): If this document is being filed together with a new appl A. Patent Application No.(s)	lication, the execution date of the applic B. Patent No.(s)	cation is:
60/785,545 filed March 23, 2006		
PCT/US2007/064858 (now 12/294,233) filed March 23, 2007	A CONTRACTOR OF THE	
	number(s) attached Yes No	
 Name and address of party to whom correspondence concerning document should be mailed: 	Total number of application	ns and patents involved 2
NOVARTIS VACCINES AND DIAGNOSTICS	7. Total fee (37 CFR 3.41	1)\$80.00
Corporate Intellectual Property – X 100B	S, INC. Enclosed	
P.O. Box 8097 Emeryville, CA 94662-8097 US		harged to deposit account,
	8. Deposit account number	er: 03-1664
	(Attach duplicate copy o	of this page if paying by deposit account)
DO NOT USE THIS SPACE		
). 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.		
Helen Lee, Reg. No. 39,270Name of Person SigningName of Person SignatureDate		
Total number of pages i	including cover sheet, attachments, and docum	ment: 4

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 22313-1460

ASSIGNMENT OF PATENT APPLICATION

Whereas Novartis Vaccines & Diagnostics, Inc., with a place of business at 4560 Horton Street, Emeryville, California 94608-2916 USA, a corporation of the State of Delaware, ("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"):

Patent No.	Application No.	Filing Date	<u>Issue Date</u>
	60/785,545	March 23, 2006	
	PCT/US2007/064858	March 23, 2007	
	12/294233	March 23, 2007	

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.

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 Emeryville, California this _______ day of June, 2009.

Novartis Vaccines & Diagnostics, Inc.

Signature
Name: Helen Lee
Title: Assistant Secretary

State of California

County of Alameda

On July 23, 200° before me, Notary Public, personally appeared Helen Lee, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

Place Notary Seal Above

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of Colifornia	,	
State of California	}	
County ofAlameda	J	
On June 23,2009 before me, Ka	ra N. Shure, Notary Public Here Insert Name and Title of the Officer	
	Here Insert Name and Title of the Officer	
personally appeared Helen Lee	Name(s) of Signer(s)	
KARA N. SHURE Gommission # 1831004 Notary Public - California Alameda County My Comm. Expires Jen 13, 2013	who proved to me on the basis of satisfactory evidence to be the person(e) whose name(e) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(iee), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(e) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seaf.	
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Place Notary Seal Above	Signature Signature of Notary Public	
OPTI	May prove valuable to persons relying on the document	
and could prevent fraudulent removal and re-		
Description of Attached Document		
Title or Type of Document:		
Document Date:	Number of Pages:	
Signer(s) Other Than Named Above:		
Capacity(ies) Claimed by Signer(s)		
Signer's Name: Individual Corporate Officer — Title(s): Partner — Limited General Attorney in Fact Trustee Guardian or Conservator Other: Signer is Representing:	☐ Individual ☐ Corporate Officer — Title(s): ☐ Partner — ☐ Limited ☐ General ☐ Attorney in Fact ☐ Trustee ☐ Guardian or Conservator ☐ Other:	
Signer Is Representing:	Signer Is Representing:	

PATENT RECORDED: 06/23/2009 REEL: 022864 FRAME: 0256

CONTINUENCIA CONTI