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. | 01/25/2011 |

RECEIVING PARTY DATA

| Name: | Novartis AG |
|-----------------|-----------------|
| Street Address: | Lichtstrasse 35 |
| City: | Basel |
| State/Country: | SWITZERLAND |
| Postal Code: | 4005 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12295967 |

CORRESPONDENCE DATA

Fax Number: (617)871-3392

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

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Correspondent Name: Novartis Institutes for BioMedical Res.

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Address Line 2: NIBR Patents

Address Line 4: Cambridge, MASSACHUSETTS 02139

| ATTORNEY DOCKET NUMBER: | PAT052035-US-PCT |
|-------------------------|------------------|
| NAME OF SUBMITTER: | Lisa Nash |

Total Attachments: 5 source=assign2#page1.tif source=assign2#page2.tif source=assign2#page3.tif source=assign2#page4.tif

PATENT REEL: 025695 FRAME: 0840 H \$40,00 12;

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ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

Novartis Vaccines and Diagnostics, Inc. 4560 Horton Street, Mail Stop X-100B Emeryville, CA 94508 USA

do hereby sell, assign and transfer to Novartis AG, a company organized under the laws of the Swiss Confederation, of Lichtstrasse 35, 4056 Basel, Switzerland, (hereinafter referred to as the "ASSIGNEE") and its successors, assigns and legal representatives, all of my right, title and interest for all countries of the world in and to (1) all of my inventions and discoveries described in the patent application(s) titled

QUINAZOLINES FOR PDK1 INHIBITION

and filed in the United States Patent and Trademark Office on November 2, 2009 and accorded Application Number 12/295,967* and/or filed in the RO/US/PCT on April 5, 2007 and accorded International Patent Application Number PCT/US2007/008592*, (2) the patent application(s) identified in (1), (3) all national stages of any international patent application identified in (1), (4) all other patent applications in all countries and regions claiming the priority of the provisional or non-provisional patent application filed in the United States Patent and Trademark Office on April 6, 2006 and accorded Application Number 60/790,304, (5) for all patent applications, all rights of priority based upon the United States patent application identified in (4) in all countries and regions under the Paris Convention for the Protection of Industrial Property, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application identified in (4) is a provisional patent application, under 35 USC 119(e) (including the right to file patent applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our names, at their election and in accordance with applicable law in all countries and regions), (6) all continuations and divisions of any United States patent application or international patent application designating the United States identified in (1), any national stages of any international application identified in (1) and any patent applications within the scope of (4) (including further continuations and divisions such as, but not limited to, continuations of continuations and continuations of divisions), ((2)-(4) and (6) hereinafter referred to collectively as "patent applications"), (7) all patents that are granted on any of said patent applications, (8) all registrations and confirmations of, and importation certificates based upon, one or more of said patents and applications for such registrations, confirmations and importation certificates and (9) all reissues, renewals and extensions of said patents, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE and their successors, assigns and legal representatives to the full ends of the terms for which said patents, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by us if this sale, assignment and transfer had not been made.

*We hereby authorize ASSIGNEE and their representatives to insert in this Assignment the filing date(s) and Application Number(s) of said patent application(s) when notified thereof.

And we hereby covenant and agree that we will, at any time, (i) upon the request, but at the expense, of ASSIGNEE or their successors, assigns or legal representatives execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, patent applications, patents, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates and applications within the scope of (8) and (9) in ASSIGNEE or their successors, assigns or legal representatives, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country

or region, (ii) upon the request, but at the expense, of **ASSIGNEE** or their successors, assigns or legal representatives execute all additional patent applications within the scope of (3), (4) and (6) and all applications within the scope of (8) or (9) and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of **ASSIGNEE** or their successors, assigns or legal representatives.

This Assignment is effective as from the earliest priority date as stated above.

Executed this 25th day of January, 2011.

Lisa E. Alexander
Assistant Secretary

Novartis Vaccines and Diagnostics, Inc.

California all-purpose acknowledgment

CIVIL CODE § 1189

| County of Alameda | m ran |
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| | • |
| On January 25, 2011 before me, El: | issa M. Nash, Notary Public Here beent Name and Tale of the Officer |
| personally appeared Lisa E. Ala | |
| | Name(s) of Signer(s) |
| | who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that help of the executed the same in his particle authorized capacity(iss), and that by his first signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. |
| ELISSA M. NASH Commission # 1868308 Notary Public - California Alameda County My Comm. Expires Oct 16, 2013 | I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. |
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| Attorney in Fact Trustee | Attorney in Fact Trustees |
| Guardian or Conservator | ☐ Trustee ☐ Guardian or Conservator |
| \$ | Other: |
| Other: | |

ACCEPTANCE OF ASSIGNMENT

With reference to the Assignment to NOVARTIS AG of an invention entitled "QUINAZOLINES FOR PDK1 INHIBITION" signed by Novartis Vaccines and Diagnostics, Inc.; this will certify that NOVARTIS AG accepts such Assignment.

NOVARTIS AG

By:

Name:

Lisa Nash

Function:

Authorized Signatory

Alicia Collins Rowe-Babb

Authorized Signatory

Date:

January 25, 2011

California all-purpose acknowledgment

| State of California | |
|---|---|
| County of Alassaca | A commence of the commence of |
| | a d. Charle Malaria Paldis |
| On Sandary 25, 2011 before me, | Here Insen Name and Title of the Officer |
| personally appeared | Name(s) of Signer(s) |
| Commission # 1851854 Mesory Public - Commy Microsta Commy Microsta Commy Commy Commission 12, 2015 | who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in-his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 seat. |
| | |
| Place Notary Seat Above | Signature Signature of Notary Public |
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