503709217 02/25/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3755858

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------|----------------|
| YI SHI | 08/22/2013 |

RECEIVING PARTY DATA

| Name: | VERTEX PHARMACEUTICALS INCORPORATED |
|-----------------|-------------------------------------|
| Street Address: | 50 NORTHERN AVENUE |
| City: | BOSTON |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 02210 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14678489 |

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: patents@vrtx.com

Correspondent Name: VERTEX PHARMACEUTICALS INCORPORATED

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| ATTORNEY DOCKET NUMBER: | VPI/11-127 US DV1 |
|-------------------------|-------------------------|
| NAME OF SUBMITTER: | FRANCES M. CUNNINGHAM |
| SIGNATURE: | /Frances M. Cunningham/ |
| DATE SIGNED: | 02/25/2016 |

Total Attachments: 4

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PATENT 503709217 REEL: 037828 FRAME: 0470

ASSIGNMENT

I,

- (1) Yi Shi, of Natick, Massachusetts,
- for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to, by virtue of our agreement with Vertex Pharmaceuticals Incorporated and do hereby assign, sell and transfer to, Vertex Pharmaceuticals Incorporated, a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having an office and a place of business at 130 Waverly Street, Cambridge, MA 02139, its successors and assigns, all hereinafter referred to as the ASSIGNEE:
- (1) the entire right, title and interest in the United States and in all countries throughout the world in and to any and all of my/our inventions, and discoveries disclosed in:
- (a) the application for United States Letters Patent entitled: PROCESSES FOR MAKING COMPOUNDS USEFUL AS INHIBITORS OF ATR KINASE, and filed in the United States Patent and Trademark Office on September 28, 2012, under Application Number 13/631,759¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or
- (b) the International Patent Application entitled: PROCESSES FOR MAKING COMPOUNDS USEFUL AS INHIBITORS OF ATR KINASE, filed under the Patent Cooperation Treaty in the United States Receiving Office on, September 28, 2012 under Application No. PCT/US2012/058127², and designating all countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefor;
- (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my/our names at the election of the ASSIGNEE or its designee, on the

¹ I/We authorize and request ASSIGNEE to insert the filing date and/or application number of said application when known.

² I/We authorize and request ASSIGNEE to insert the filing date and/or application number of said application when known.

aforesaid inventions, discoveries and applications in the United States and in any other country of the world;

- (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any other country of the world, and in and to any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof; and
- (4) the entire right, title and interest in and to all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications including, but not limited to, the following priority application(s):

| 61/541,865 | US | September 30, 2011 |
|-----------------|---------|--------------------|
| Application No. | Country | Filing Date |

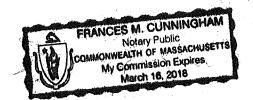
and all rights of priority in any country of the world deriving from the above-identified International Patent Application.

I hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

I agree, at any time, upon the request of the ASSIGNEE to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries or applications, and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

(1) Yi Shi



ACKNOWLEDGMENT OF ASSIGNEE

By:

Stephen L. Nesbitt

Vice President and Chief IP Counsel

VERTEX PHARMACEUTICALS INCORPORATED

Date: 10/23/13

Commonwealth of Massachusetts County of Middlesex

On this 23° day of 1000, 2013, before me, the undersigned notary public, personally appeared Stephen L. Nesbitt (name of document signer), proved to me through satisfactory evidence of identification which was/were: personal knowledge of identity, a driver's license, other (please identify) ______, to be the person whose name is signed on this document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Notary Public

My Commission Expires: 5/4/18

Sign Har Red Bridge Secretary of the Sec

Doc ID: 689718