PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6250380

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------------|----------------|
| GABRIEL MARTINEZ-BOTELLA | 01/04/2006 |
| QING TANG | 01/03/2006 |
| FRANCOIS MALTAIS | 01/23/2006 |
| JUDITH STRAUB | 01/09/2006 |
| MICHAEL HALE | 01/06/2006 |

RECEIVING PARTY DATA

| Name: | VERTEX PHARMACEUTICALS INCORPORATED |
|-----------------|-------------------------------------|
| Street Address: | 130 WAVERLY STREET |
| City: | CAMBRIDGE |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 02139 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16363905 |

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: cmlondono@bryancave.com

Correspondent Name: BRYAN CAVE LEIGHTON PAISNER LLP Address Line 1: 1290 AVENUE OF THE AMERICAS

Address Line 4: NEW YORK, NEW YORK 10104

| ATTORNEY DOCKET NUMBER: | 1065272.000565 |
|-------------------------|---------------------|
| NAME OF SUBMITTER: | CHRISTINA LONDONO |
| SIGNATURE: | /Christina Londono/ |
| DATE SIGNED: | 08/14/2020 |

Total Attachments: 16

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PATENT REEL: 053494 FRAME: 0177

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PATENT REEL: 053494 FRAME: 0178

Attorney Docket No.: VPI/04-106

ASSIGNMENT

I/We,

- (1) Gabriel Martinez-Botella, of West Roxbury, MA;
- (2) Michael Hale, of Bedford, MA;
- (3) Francois Maltais, of Tewksbury, MA;
- (4) Judith Straub, of Santa Cruz, CA; and
- (5) Qing Tang, of Acton, MA;

for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to, and do hereby assign, sell and transfer to, Vertex Pharmaceuticals Incorporated, a corporation organized and existing under the laws of the 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: PYRROLE INHIBITORS OF ERK PROTEIN KINASE, SYNTHESIS THEREOF AND INTERMEDIATES THERETO, and filed in the United States Patent and Trademark Office on May 13, 2005, under Application Number 11/128,870, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or
- (b) the International Patent Application entitled: PYRROLE INHIBITORS OF ERK PROTEIN KINASE, SYNTHESIS THEREOF AND INTERMEDIATES THERETO, filed under the Patent Cooperation Treaty in the United States Receiving Office on May 13, 2005 under Application No. PCT/US05/16902 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 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):

| 60/571,309 | United States | May 14, 2004 |
|-----------------|---------------|--------------|
| Application No. | Country | Filing Date |
| Application No. | Country | Filing Date |

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

I/We 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/We 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/We 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) Gabriel Martinez-Botella

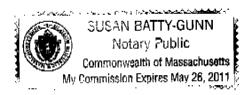
Date: 1/4/56_____

State of Massachusetts
County of Michelesex

On this 4th day of 1, 2006, before me, the undersigned notary public, personally appeared Gabriel Martinez-Botella and proved to me through satisfactory evidence of identification 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: 5/26 1)



| | (2) Michael Hale |
|---|--|
| | Date: |
| ' 14:C++i-m to be the wetcon Whose DSD | 5, before me, the undersigned notary public, roved to me through satisfactory evidence of ne is signed on this document and who swore or ocument are truthful and accurate to the best of |
| Notary Public My Commission Expires: | |
| | (3) François Maltais |
| | Date: |
| State of | |
| - ' I I-C I'an ta ha the pareon Whose 119 | 95, before me, the undersigned notary public, and proved to me through satisfactory evidence of me is signed on this document and who swore or locument are truthful and accurate to the best of |
| Notary Public My Commission Expires: | |

| | (4) Judith Straub |
|--|--|
| | Date: |
| State of | |
| dentification to be the person whos | , 2005, before me, the undersigned notary public, and proved to me through satisfactory evidence of the name is signed on this document and who swore or the document are truthful and accurate to the best of |
| Notary Public My Commission Expires: | · |
| | a 2- |
| | (5) Qing Tang Date: |
| State of Mansalusett County of Millean | <u>ko</u> _ |
| personally appeared Qing I ang and dentification to be the person whos | , 200 before me, the undersigned notary public, I proved to me through satisfactory evidence of se name is signed on this document and who swore or the document are truthful and accurate to the best of |
| Susan Batty - S Notary Public My Commission Expires: 5/06 | SUSAN BATTY-GUNN Notary Public Commonwealth of Massachusett My Commission Expires May 26, 201 |

Attorney Docket No.: VPI/04-106

ASSIGNMENT

I/We,

- (1) Gabriel Martinez-Botella, of West Roxbury, MA;
- (2) Michael Hale, of Bedford, MA;
- (3) François Maltais, of Tewksbury, MA;
- (4) Judith Straub, of Santa Cruz, CA; and
- (5) Qing Tang, of Acton, MA;

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| 60/571,309 | United States | May 14, 2004 |
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| Application No. | Country | Filing Date |
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| | (1) Gabriel Martinez-Botella |
|----------------------------------|--|
| | Date: |
| State of | _ _ |
| County of | |
| personally appeared Gabriel Mart | , 2005, before me, the undersigned notary public, inez-Botella and proved to me through satisfactory e person whose name is signed on this document and the contents of the document are truthful and accurate and belief. |
| | |
| Notary Public | _ |
| My Commission Expires: | • |

| | (2) Michael Hale |
|--|---|
| | Date: |
| IN WITNESS WHEREOF, We have hereu | into set hand and seal |
| Signature of witness: | |
| this day of Date of signing (| (3) François Maltais Date: 01/23/06 |
| State of | , |
| On this <u>236</u> day of <u>January</u> 2005 personally appeared Francois Madais and identification to be the person whose name | , before me, the undersigned notary public, proved to me through satisfactory evidence of the is signed on this document and who swore or cument are truthful and accurate to the best of |
| My Commission Expires: (2)4/5/ | LISA M. ROMANO Notary Public Commonwealth of Massachusetts My Commission Expires May 6, 2009 |

| | ludi Strane |
|--|---|
| | (4) Judith Straub |
| | Date: 1-09-06 |
| IN WITNESS WHEREOF, We have hereun | to set hand and seal |
| Signature of witness: | <u></u> |
| this 09 day of January 2006 Date of signing | |
| | |
| | |
| | (5) Qing Tang |
| | Date: |
| State of | |
| On this day of, 2005, personally appeared Qing Tang and proved identification to be the person whose name affirmed to me that the contents of the docu his/her knowledge and belief. | before me, the undersigned notary public, to me through satisfactory evidence of is signed on this document and who swore or ment are truthful and accurate to the best of |
| Notary Public My Commission Expires: | |

Attorney Docket No.: VPI/04-106

ASSIGNMENT

ĽWe,

- Gabriel Martinez-Botella, of West Roxbury, MA;
- (2) Michael Hale, of Bedford, MA;
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Page 1 of 6

- (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 aforesaid inventions, discoveries and applications in the United States and in any other country of the world;
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| United States | May 14, 2004 |
|---------------|--------------|
| Country | Filing Date |
| Country | Filing Date |
| | |

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| | (1) Gabriel Martinez-Botella |
|--|--|
| | Date: |
| State of | |
| County of | |
| personally appeared Gabriel Martin evidence of identification to be the | _, 2005, before me, the undersigned notary public, ez-Botella and proved to me through satisfactory person whose name is signed on this document and se contents of the document are truthful and accurate 1 belief. |
| Notary Public | |
| My Commission Expires: | |

| | May 12 Dale |
|--|---|
| | (2) Michael Hale |
| | Date: 14- 06 2006 |
| IN WITNESS WHEREOF, We have hereun | to set hand and seal |
| Signature of witness: | |
| this 6 day of January 2006. Date of signing | • |
| | · |
| | (3) François Maltais |
| | Date: |
| State of | |
| On this, 2005, b personally appeared Francois Maltais and pridentification to be the person whose name is affirmed to me that the contents of the documents of the docum | efore me, the undersigned notary public, oved to me through satisfactory evidence of a signed on this document and who swore or ment are truthful and accurate to the best of |
| Notary Public My Commission Expires: | |

| | (4) Judith Straub |
|---|---|
| | Date: |
| IN WITNESS WHEREOF, We have here | cunto set hand and scal |
| Signature of witness: | |
| this day of Dute of signing | <u></u> . |
| | |
| | (5) Qing Tang |
| | Date: |
| State of | |
| personally appeared Qing Tang and providentification to be the person whose nam | 5, before me, the undersigned notary public, ed to me through satisfactory evidence of ne is signed on this document and who swore or scument are truthful and accurate to the best of |
| Notary Public My Commission Expires; | |

ACKNOWLEDGMENT OF ASSIGNEE

By: 1/23/2006

On this Asy day of Muw, 2005, before me, the undersigned notary public, personally appeared Stephen L. Nesbitt proved to me through satisfactory evidence of identification 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: 5/9/09

