

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3811338

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
MARK STROHMEIER	10/07/2015
JOHN P. CAESAR	02/01/2016
PATRICK RAYMOND CONNELLY	03/07/2016
MAJED FAWEZ	03/01/2016
EDUARD LUSS-LUSIS	02/01/2016
BRIAN R. MCCLAIN	02/03/2016
ALES MEDEK	03/04/2016
HAI MIAO	02/05/2016
KWAME WIREDU NTI-ADDAE	02/02/2016
PING YIN	02/01/2016
YUEGANG ZHANG	03/11/2016

**RECEIVING PARTY DATA**

<b>Name:</b>	VERTEX PHARMACEUTICALS INCORPORATED
<b>Street Address:</b>	50 NORTHERN AVENUE
<b>City:</b>	BOSTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02210

**PROPERTY NUMBERS Total: 2**

Property Type	Number
<b>Application Number:</b>	14877914
<b>PCT Number:</b>	US2015054577

**CORRESPONDENCE DATA**

Fax Number: (617)366-3974

*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.*

Phone: 6179618018

Email: patents@vrtx.com

Correspondent Name: VERTEX PHARMACEUTICALS INCORPORATED

Address Line 1: 50 NORTHERN AVENUE

Address Line 4: BOSTON, MASSACHUSETTS 02210

**PATENT**

<b>ATTORNEY DOCKET NUMBER:</b>	VPI/14-106 US2 & WO2
<b>NAME OF SUBMITTER:</b>	LAUREN M. DEVINCENZO
<b>SIGNATURE:</b>	/Lauren M. DeVincenzo/
<b>DATE SIGNED:</b>	04/01/2016

**Total Attachments: 60**

source=VPI-14-106 US2 & WO2 executed assignment#page1.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page2.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page3.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page4.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page5.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page6.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page7.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page8.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page9.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page10.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page11.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page12.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page13.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page14.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page15.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page16.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page17.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page18.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page19.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page20.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page21.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page22.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page23.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page24.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page25.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page26.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page27.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page28.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page29.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page30.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page31.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page32.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page33.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page34.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page35.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page36.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page37.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page38.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page39.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page40.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page41.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page42.tif

source=VPI-14-106 US2 & WO2 executed assignment#page43.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page44.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page45.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page46.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page47.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page48.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page49.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page50.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page51.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page52.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page53.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page54.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page55.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page56.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page57.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page58.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page59.tif  
source=VPI-14-106 US2 & WO2 executed assignment#page60.tif

## ASSIGNMENT

We,

- (1) Mark Strohmeier, of Arlington, Massachusetts;
- (2) John P. Caesar, Jr., of Lancaster, Massachusetts;
- (3) Patrick Raymond Connelly, of Harvard, Massachusetts;
- (4) Majed Fawaz, of Foxboro, Massachusetts;
- (5) Eduard Luss-Lusis, of Belmont, Massachusetts;
- (6) Brian R. McClain, of Harvard, Massachusetts;
- (7) Ales Medek, of Winchester, Massachusetts;
- (8) Hai Miao, of Winchester, Massachusetts;
- (9) Kwame Wiredu Nti-Addae, of Tewksbury, Massachusetts;
- (10) Ping Yin, of Arlington, Massachusetts; and
- (11) Yuegang Zhang, of Wayland, 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 50 Northern Avenue, Boston, Massachusetts 02210, 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: CO-CRYSTALS OF MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, and filed in the United States Patent and Trademark Office on October 7, 2015, under Application Number 14/877,914<sup>1</sup>, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

---

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

(b) the International Patent Application entitled: MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, filed under the Patent Cooperation Treaty in the United States Receiving Office on October 7, 2015, under Application No. PC/US2015/05245<sup>2</sup> 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):

<u>62/060,828</u>	<u>United States of America</u>	<u>October 7, 2014</u>
Application No.	Country	Filing Date

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

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.

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

---

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

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.

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.

Mark Strohmeier

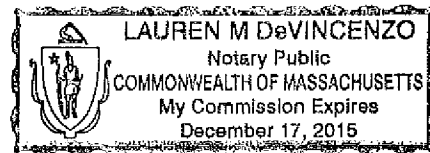
(1) Mark Strohmeier

Date: 07-Oct-2015

Commonwealth of Massachusetts  
County of Suffolk

On this 7th day of October, 2015, before me, the undersigned notary public, personally appeared Mark Strohmeier, 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.

Lauren M DeVincenzo  
Notary Public  
My Commission Expires: 12-17-2015



\_\_\_\_\_  
(2) John P. Caesar

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared John P. Caesar, 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: \_\_\_\_\_



\_\_\_\_\_  
(3) Patrick Raymond Connelly

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Patrick Raymond Connelly, 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: \_\_\_\_\_

\_\_\_\_\_

(4) Majed Fawaz

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

\_\_\_\_\_  
(5) Eduard Luss-Luis

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Eduard Luss-Luis, 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: \_\_\_\_\_

\_\_\_\_\_  
(6) Brian R. McClain

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Brian R. McClain, 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: \_\_\_\_\_

\_\_\_\_\_

(7) Ales Medek

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ales Medek, 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: \_\_\_\_\_

\_\_\_\_\_  
(8) Hai Miao

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Hai Miao, 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: \_\_\_\_\_

\_\_\_\_\_  
(9) Kwame Wiredu Nti-Addae

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared, Kwame Wiredu Nti-Addae, 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: \_\_\_\_\_

\_\_\_\_\_  
(10) Ping Yin

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ping Yin, 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: \_\_\_\_\_



\_\_\_\_\_

(11) Yuegang Zhang

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

ACKNOWLEDGMENT OF ASSIGNEE

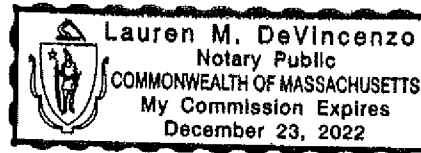
By: Kerry A. Flynn  
Kerry A. Flynn  
Vice President and Chief IP Counsel  
on behalf of Vertex Pharmaceuticals Incorporated

Date: 17 March 28, 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 28th day of March, 2015, before me, the undersigned notary public, personally appeared Kerry A. Flynn (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.

Lauren M. DeVincenzo  
Notary Public  
My Commission Expires: 12-23-2022



## ASSIGNMENT

We,

- (1) Mark Strohmeier, of Arlington, Massachusetts;
- (2) John P. Caesar, Jr., of Lancaster, Massachusetts;
- (3) Patrick Raymond Connelly, of Harvard, Massachusetts;
- (4) Majed Fawaz, of Foxboro, Massachusetts;
- (5) Eduard Luss-Lusis, of Belmont, Massachusetts;
- (6) Brian R. McClain, of Harvard, Massachusetts;
- (7) Ales Medek, of Winchester, Massachusetts;
- (8) Hai Miao, of Winchester, Massachusetts;
- (9) Kwame Wiredu Nti-Addae, of Tewksbury, Massachusetts;
- (10) Ping Yin, of Arlington, Massachusetts; and
- (11) Yuegang Zhang, of Wayland, 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 50 Northern Avenue, Boston, Massachusetts 02210, 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: CO-CRYSTALS OF MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, and filed in the United States Patent and Trademark Office on October 7, 2015, under Application Number *14/877,914*<sup>1</sup>, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

---

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

(b) the International Patent Application entitled: MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, filed under the Patent Cooperation Treaty in the United States Receiving Office on October 7, 2015, under Application No. ~~PCT/US2015/054577~~<sup>2</sup> 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):

62/060,828	United States of America	October 7, 2014
Application No.	Country	Filing Date

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

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.

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

---

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

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.

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) Mark Strohmeier

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Mark Strohmeier, 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: \_\_\_\_\_

John P. Caesar

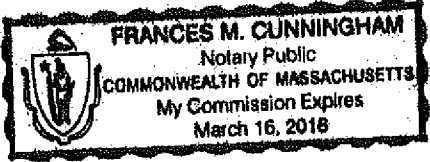
(2) John P. Caesar

Date: Feb 1 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 1<sup>st</sup> day of February, <sup>2016</sup>~~2015~~, before me, the undersigned notary public, personally appeared John P. Caesar, 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.

Frances M. Cunningham  
Notary Public  
My Commission Expires: 3/16/2018



Patrick Raymond Connelly

(3) Patrick Raymond Connelly

Date: 07 MAR 2016

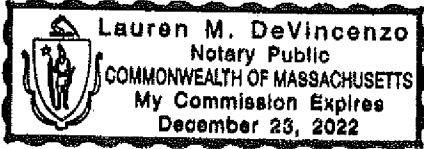
Commonwealth of Massachusetts  
County of Suffolk

On this 7th day of MARCH, 2015, before me, the undersigned notary public, personally appeared Patrick Raymond Connelly, 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.

Lauren M DeVincenzo

Notary Public

My Commission Expires: 12-23-2022





\_\_\_\_\_  
(4) Majed Fawaz

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Eduard Luss

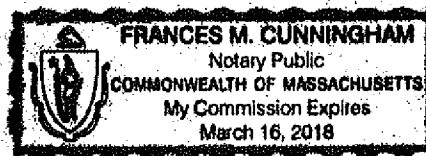
(S) Eduard Luss-Lusis

Date: Feb 1st 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 1<sup>st</sup> day of February, 2016, before me, the undersigned notary public, personally appeared Eduard Luss-Lusis, 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.

Frances M. Cunningham  
Notary Public  
My Commission Expires: 3/16/2018



*Brian R. McClain*

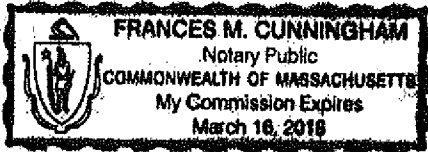
(6) Brian R. McClain

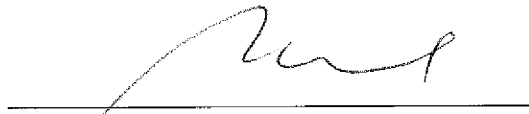
Date: *2/3/2016*

Commonwealth of Massachusetts  
County of Suffolk

On this *3<sup>rd</sup>* day of *February*, <sup>*2016*</sup> 2015, before me, the undersigned notary public, personally appeared *Brian R. McClain*, 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.

*Frances M. Cunningham*  
Notary Public  
My Commission Expires: *3/16/2018*





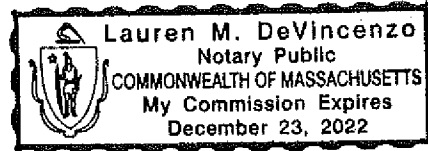
(7) Ales Medek

Date: 04 MAR 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 4th day of March, 2015, before me, the undersigned notary public, personally appeared Ales Medek, 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.

Lauren M DeVincenzo  
Notary Public  
My Commission Expires: 12-23-2022





(8) Hai Miao

Date: Feb 5, 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 5<sup>th</sup> day of February, 2015, before me, the undersigned notary public, personally appeared Hai Miao, 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.

M R Shapiro

Notary Public

My Commission Expires: January 23, 2020



MISCHELL R. SHAPIRO  
NOTARY PUBLIC  
Commonwealth of Massachusetts  
My Commission Expires  
January 23, 2020



(9) Kwame Wiredu Nti-Addae

Date: 02 Feb 2016

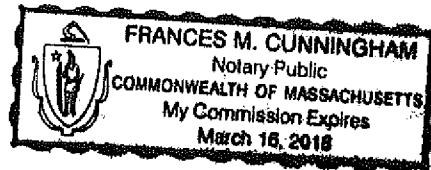
Commonwealth of Massachusetts  
County of Suffolk

On this 2nd day of February, 2016, before me, the undersigned notary public, personally appeared, Kwame Wiredu Nti-Addae, 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.

Francis M. Cunningham

Notary Public

My Commission Expires: 3/16/2018



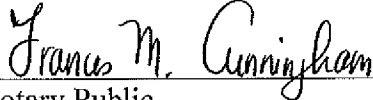


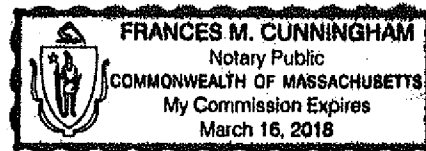
(10) Ping Yin

Date: 02/01/2016

Commonwealth of Massachusetts  
County of Suffolk

On this 1<sup>st</sup> day of February, 2016, before me, the undersigned notary public, personally appeared Ping Yin, 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: 3/16/2018



\_\_\_\_\_  
(11) Yuegang Zhang

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing



ACKNOWLEDGMENT OF ASSIGNEE

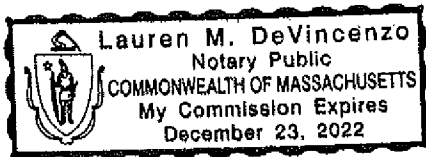
By: Kerry A. Flynn  
Kerry A. Flynn  
Vice President and Chief IP Counsel  
on behalf of Vertex Pharmaceuticals Incorporated

Date: MARCH 28, 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 28th day of March, 2015<sup>GLMD</sup>, before me, the undersigned notary public, personally appeared Kerry A. Flynn (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.

Lauren M. DeVincenzo  
Notary Public  
My Commission Expires: 12-23-2022



## ASSIGNMENT

We,

- (1) Mark Strohmeier, of Arlington, Massachusetts;
- (2) John P. Caesar, Jr., of Lancaster, Massachusetts;
- (3) Patrick Raymond Connelly, of Harvard, Massachusetts;
- (4) Majed Fawaz, of Foxboro, Massachusetts;
- (5) Eduard Luss-Lusis, of Belmont, Massachusetts;
- (6) Brian R. McClain, of Harvard, Massachusetts;
- (7) Ales Medek, of Winchester, Massachusetts;
- (8) Hai Miao, of Winchester, Massachusetts;
- (9) Kwame Wiredu Nti-Addae, of Tewksbury, Massachusetts;
- (10) Ping Yin, of Arlington, Massachusetts; and
- (11) Yuegang Zhang, of Wayland, 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 50 Northern Avenue, Boston, Massachusetts 02210, 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: CO-CRYSTALS OF MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, and filed in the United States Patent and Trademark Office on October 7, 2015, under Application Number 14/877,914<sup>1</sup>, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

---

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

(b) the International Patent Application entitled: MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, filed under the Patent Cooperation Treaty in the United States Receiving Office on October 7, 2015, under Application No. ~~PT/US2015/024517~~<sup>2</sup>, 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):

62/060,828	United States of America	October 7, 2014
Application No.	Country	Filing Date

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

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.

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

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

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.

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) Mark Strohmeier

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Mark Strohmeier, 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: \_\_\_\_\_

\_\_\_\_\_  
(2) John P. Caesar

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared John P. Caesar, 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: \_\_\_\_\_

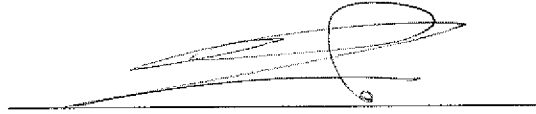
\_\_\_\_\_  
(3) Patrick Raymond Connelly

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Patrick Raymond Connelly, 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: \_\_\_\_\_



(4) Majed Fawaz

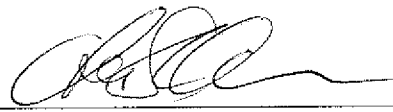
Date: 1 March 2016

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) 

Printed Name of Witness: Peter Mueller, PhD

this 1<sup>st</sup> day of March 2016  
Date of signing

Signature of witness: (2) 

Printed Name of Witness: ANDERS CRAFT, PhD

this 1<sup>st</sup> day of March 2016  
Date of signing



\_\_\_\_\_  
(5) Eduard Luss-Lusis

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Eduard Luss-Lusis, 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: \_\_\_\_\_

\_\_\_\_\_  
(6) Brian R. McClain

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Brian R. McClain, 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: \_\_\_\_\_

\_\_\_\_\_  
(7) Ales Medek

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ales Medek, 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: \_\_\_\_\_

\_\_\_\_\_  
(8) Hai Miao

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Hai Miao, 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: \_\_\_\_\_

\_\_\_\_\_  
(9) Kwame Wiredu Nti-Addae

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared, Kwame Wiredu Nti-Addae, 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: \_\_\_\_\_

\_\_\_\_\_  
(10) Ping Yin

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ping Yin, 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: \_\_\_\_\_

\_\_\_\_\_  
(11) Yuegang Zhang

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

ACKNOWLEDGMENT OF ASSIGNEE

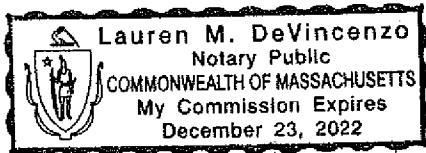
By: *Kerry A. Flynn*  
Kerry A. Flynn  
Vice President and Chief IP Counsel  
on behalf of Vertex Pharmaceuticals Incorporated

Date: March 28, 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 28th day of March, 201<sup>6</sup>5, before me, the undersigned notary public, personally appeared Kerry A. Flynn (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.

Lauren M. DeVincenzo  
Notary Public  
My Commission Expires: 12-23-2022





## ASSIGNMENT

We,

- (1) Mark Strohmeier, of Arlington, Massachusetts;
- (2) John P. Caesar, Jr., of Lancaster, Massachusetts;
- (3) Patrick Raymond Connelly, of Harvard, Massachusetts;
- (4) Majed Fawaz, of Foxboro, Massachusetts;
- (5) Eduard Luss-Lusis, of Belmont, Massachusetts;
- (6) Brian R. McClain, of Harvard, Massachusetts;
- (7) Ales Medek, of Winchester, Massachusetts;
- (8) Hai Miao, of Winchester, Massachusetts;
- (9) Kwame Wiredu Nti-Addae, of Tewksbury, Massachusetts;
- (10) Ping Yin, of Arlington, Massachusetts; and
- (11) Yuegang Zhang, of Wayland, 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 50 Northern Avenue, Boston, Massachusetts 02210, 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: CO-CRYSTALS OF MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, and filed in the United States Patent and Trademark Office on October 7, 2015, under Application Number 14/877,914<sup>1</sup>, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

---

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

(b) the International Patent Application entitled: MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR, filed under the Patent Cooperation Treaty in the United States Receiving Office on October 7, 2015, under Application No. ~~10/155015/04577~~<sup>2</sup>, 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):

62/060,828	United States of America	October 7, 2014
Application No.	Country	Filing Date
and all rights of priority in any country of the world deriving from the above-identified International Patent Application.		

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.

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

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

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.

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) Mark Strohmeier

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Mark Strohmeier, 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: \_\_\_\_\_

\_\_\_\_\_  
(2) John P. Caesar

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared John P. Caesar, 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: \_\_\_\_\_

\_\_\_\_\_  
(3) Patrick Raymond Connelly

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Patrick Raymond Connelly, 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: \_\_\_\_\_

\_\_\_\_\_

(4) Majed Fawaz

Date: \_\_\_\_\_

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: (1) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

Signature of witness: (2) \_\_\_\_\_

Printed Name of Witness: \_\_\_\_\_

this \_\_\_\_\_ day of \_\_\_\_\_  
Date of signing

\_\_\_\_\_  
(5) Eduard Luss-Lusis

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Eduard Luss-Lusis, 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: \_\_\_\_\_



\_\_\_\_\_  
(6) Brian R. McClain

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Brian R. McClain, 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: \_\_\_\_\_

\_\_\_\_\_  
(7) Ales Medek

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ales Medek, 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: \_\_\_\_\_

\_\_\_\_\_  
(8) Hai Miao

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Hai Miao, 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: \_\_\_\_\_

\_\_\_\_\_  
(9) Kwame Wiredu Nti-Addae

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared, Kwame Wiredu Nti-Addae, 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: \_\_\_\_\_

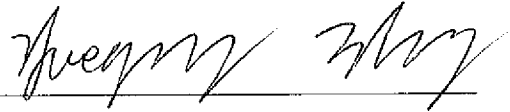
\_\_\_\_\_  
(10) Ping Yin

Date: \_\_\_\_\_

Commonwealth of Massachusetts  
County of Suffolk

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me, the undersigned notary public, personally appeared Ping Yin, 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.

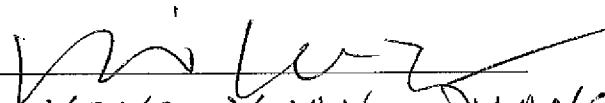
\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_



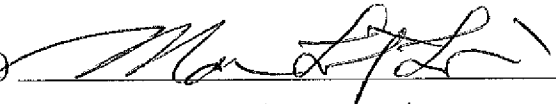
(11) Yuegang Zhang

Date: 03/11/2016

IN WITNESS WHEREOF, I have hereunto set hand and seal

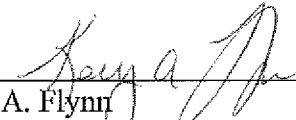
Signature of witness: (1)   
Printed Name of Witness: YING YUAN ZHANG

this 11 day of March 2016  
Date of signing

Signature of witness: (2)   
Printed Name of Witness: Man Ling Liu

this 11 day of March 2016  
Date of signing

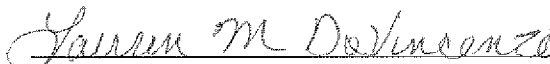
ACKNOWLEDGMENT OF ASSIGNEE

By:   
Kerry A. Flynn  
Vice President and Chief IP Counsel  
on behalf of Vertex Pharmaceuticals Incorporated

Date: March 28, 2016

Commonwealth of Massachusetts  
County of Suffolk

On this 28th day of March, 2016, before me, the undersigned notary public, personally appeared Kerry A. Flynn <sup>GLMD</sup> (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: 12-23-2022

