

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT2790027

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
PAUL CHARIFSON	08/18/2010
MICHAEL P. CLARK	08/17/2010
UPUL K. BANDARAGE	08/23/2010
RANDY S. BETHIEL	08/16/2010
JOHN J. COURT	08/16/2010
HONGBO DENG	08/30/2010
IOANA DRUTU	08/30/2010
JOHN P. DUFFY	08/16/2010
LUC J. FARMER	08/16/2010
HUAI GAO	08/16/2010
WENXIN GU	08/18/2010
DYLAN H. JACOBS	09/09/2010
JOSEPH M. KENNEDY	08/16/2010
MARK W. LEDEBOER	08/16/2010
BRIAN LEDFORD	08/16/2010
FRANCOIS MALTAIS	08/16/2010
EMANUELE PEROLA	08/17/2010
TIANSHENG WANG	08/17/2010
M. WOODS WANNAMAKER	07/26/2010
RANDAL BYRN	12/05/2011
YI ZHOU	08/30/2011
CHAO LIN	08/29/2011
MIN JIANG	08/18/2011
STEVEN JONES	08/18/2011
URSULA A. GERMANN	08/19/2011
ANN DAK-YEE KWONG	03/14/2014
FRANCESCO SALITURO	05/07/2013
RECEIVING PARTY DATA	
Name:	VERTEX PHARMACEUTICALS INCORPORATED
Street Address:	50 NORTHERN AVENUE, 15TH FLOOR
City:	BOSTON
PATENT	

State/Country:	MASSACHUSETTS
Postal Code:	02210

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14098867

CORRESPONDENCE DATA

Fax Number:

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

Email: Frances_Cunningham@vrtx.com
Correspondent Name: VERTEX PHARMACEUTICALS INCORPORATED
Address Line 1: 50 NORTHERN AVENUE, 15TH FLOOR
Address Line 4: BOSTON, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER: VPI/09-103 USW CN1 DV1

NAME OF SUBMITTER: FRANCES M. CUNNINGHAM

SIGNATURE: /Frances M. Cunningham/

DATE SIGNED: 03/28/2014

Total Attachments: 134

source=VPI_09_103USWCN1DV1_Assignment#page1.tif
source=VPI_09_103USWCN1DV1_Assignment#page2.tif
source=VPI_09_103USWCN1DV1_Assignment#page3.tif
source=VPI_09_103USWCN1DV1_Assignment#page4.tif
source=VPI_09_103USWCN1DV1_Assignment#page5.tif
source=VPI_09_103USWCN1DV1_Assignment#page6.tif
source=VPI_09_103USWCN1DV1_Assignment#page7.tif
source=VPI_09_103USWCN1DV1_Assignment#page8.tif
source=VPI_09_103USWCN1DV1_Assignment#page9.tif
source=VPI_09_103USWCN1DV1_Assignment#page10.tif
source=VPI_09_103USWCN1DV1_Assignment#page11.tif
source=VPI_09_103USWCN1DV1_Assignment#page12.tif
source=VPI_09_103USWCN1DV1_Assignment#page13.tif
source=VPI_09_103USWCN1DV1_Assignment#page14.tif
source=VPI_09_103USWCN1DV1_Assignment#page15.tif
source=VPI_09_103USWCN1DV1_Assignment#page16.tif
source=VPI_09_103USWCN1DV1_Assignment#page17.tif
source=VPI_09_103USWCN1DV1_Assignment#page18.tif
source=VPI_09_103USWCN1DV1_Assignment#page19.tif
source=VPI_09_103USWCN1DV1_Assignment#page20.tif
source=VPI_09_103USWCN1DV1_Assignment#page21.tif
source=VPI_09_103USWCN1DV1_Assignment#page22.tif
source=VPI_09_103USWCN1DV1_Assignment#page23.tif
source=VPI_09_103USWCN1DV1_Assignment#page24.tif
source=VPI_09_103USWCN1DV1_Assignment#page25.tif

PATENT

REEL: 032549 FRAME: 0002

source=VPI_09_103USWCN1DV1_Assignment#page26.tif
source=VPI_09_103USWCN1DV1_Assignment#page27.tif
source=VPI_09_103USWCN1DV1_Assignment#page28.tif
source=VPI_09_103USWCN1DV1_Assignment#page29.tif
source=VPI_09_103USWCN1DV1_Assignment#page30.tif
source=VPI_09_103USWCN1DV1_Assignment#page31.tif
source=VPI_09_103USWCN1DV1_Assignment#page32.tif
source=VPI_09_103USWCN1DV1_Assignment#page33.tif
source=VPI_09_103USWCN1DV1_Assignment#page34.tif
source=VPI_09_103USWCN1DV1_Assignment#page35.tif
source=VPI_09_103USWCN1DV1_Assignment#page36.tif
source=VPI_09_103USWCN1DV1_Assignment#page37.tif
source=VPI_09_103USWCN1DV1_Assignment#page38.tif
source=VPI_09_103USWCN1DV1_Assignment#page39.tif
source=VPI_09_103USWCN1DV1_Assignment#page40.tif
source=VPI_09_103USWCN1DV1_Assignment#page41.tif
source=VPI_09_103USWCN1DV1_Assignment#page42.tif
source=VPI_09_103USWCN1DV1_Assignment#page43.tif
source=VPI_09_103USWCN1DV1_Assignment#page44.tif
source=VPI_09_103USWCN1DV1_Assignment#page45.tif
source=VPI_09_103USWCN1DV1_Assignment#page46.tif
source=VPI_09_103USWCN1DV1_Assignment#page47.tif
source=VPI_09_103USWCN1DV1_Assignment#page48.tif
source=VPI_09_103USWCN1DV1_Assignment#page49.tif
source=VPI_09_103USWCN1DV1_Assignment#page50.tif
source=VPI_09_103USWCN1DV1_Assignment#page51.tif
source=VPI_09_103USWCN1DV1_Assignment#page52.tif
source=VPI_09_103USWCN1DV1_Assignment#page53.tif
source=VPI_09_103USWCN1DV1_Assignment#page54.tif
source=VPI_09_103USWCN1DV1_Assignment#page55.tif
source=VPI_09_103USWCN1DV1_Assignment#page56.tif
source=VPI_09_103USWCN1DV1_Assignment#page57.tif
source=VPI_09_103USWCN1DV1_Assignment#page58.tif
source=VPI_09_103USWCN1DV1_Assignment#page59.tif
source=VPI_09_103USWCN1DV1_Assignment#page60.tif
source=VPI_09_103USWCN1DV1_Assignment#page61.tif
source=VPI_09_103USWCN1DV1_Assignment#page62.tif
source=VPI_09_103USWCN1DV1_Assignment#page63.tif
source=VPI_09_103USWCN1DV1_Assignment#page64.tif
source=VPI_09_103USWCN1DV1_Assignment#page65.tif
source=VPI_09_103USWCN1DV1_Assignment#page66.tif
source=VPI_09_103USWCN1DV1_Assignment#page67.tif
source=VPI_09_103USWCN1DV1_Assignment#page68.tif
source=VPI_09_103USWCN1DV1_Assignment#page69.tif
source=VPI_09_103USWCN1DV1_Assignment#page70.tif
source=VPI_09_103USWCN1DV1_Assignment#page71.tif
source=VPI_09_103USWCN1DV1_Assignment#page72.tif
source=VPI_09_103USWCN1DV1_Assignment#page73.tif

source=VPI_09_103USWCN1DV1_Assignment#page74.tif
source=VPI_09_103USWCN1DV1_Assignment#page75.tif
source=VPI_09_103USWCN1DV1_Assignment#page76.tif
source=VPI_09_103USWCN1DV1_Assignment#page77.tif
source=VPI_09_103USWCN1DV1_Assignment#page78.tif
source=VPI_09_103USWCN1DV1_Assignment#page79.tif
source=VPI_09_103USWCN1DV1_Assignment#page80.tif
source=VPI_09_103USWCN1DV1_Assignment#page81.tif
source=VPI_09_103USWCN1DV1_Assignment#page82.tif
source=VPI_09_103USWCN1DV1_Assignment#page83.tif
source=VPI_09_103USWCN1DV1_Assignment#page84.tif
source=VPI_09_103USWCN1DV1_Assignment#page85.tif
source=VPI_09_103USWCN1DV1_Assignment#page86.tif
source=VPI_09_103USWCN1DV1_Assignment#page87.tif
source=VPI_09_103USWCN1DV1_Assignment#page88.tif
source=VPI_09_103USWCN1DV1_Assignment#page89.tif
source=VPI_09_103USWCN1DV1_Assignment#page90.tif
source=VPI_09_103USWCN1DV1_Assignment#page91.tif
source=VPI_09_103USWCN1DV1_Assignment#page92.tif
source=VPI_09_103USWCN1DV1_Assignment#page93.tif
source=VPI_09_103USWCN1DV1_Assignment#page94.tif
source=VPI_09_103USWCN1DV1_Assignment#page95.tif
source=VPI_09_103USWCN1DV1_Assignment#page96.tif
source=VPI_09_103USWCN1DV1_Assignment#page97.tif
source=VPI_09_103USWCN1DV1_Assignment#page98.tif
source=VPI_09_103USWCN1DV1_Assignment#page99.tif
source=VPI_09_103USWCN1DV1_Assignment#page100.tif
source=VPI_09_103USWCN1DV1_Assignment#page101.tif
source=VPI_09_103USWCN1DV1_Assignment#page102.tif
source=VPI_09_103USWCN1DV1_Assignment#page103.tif
source=VPI_09_103USWCN1DV1_Assignment#page104.tif
source=VPI_09_103USWCN1DV1_Assignment#page105.tif
source=VPI_09_103USWCN1DV1_Assignment#page106.tif
source=VPI_09_103USWCN1DV1_Assignment#page107.tif
source=VPI_09_103USWCN1DV1_Assignment#page108.tif
source=VPI_09_103USWCN1DV1_Assignment#page109.tif
source=VPI_09_103USWCN1DV1_Assignment#page110.tif
source=VPI_09_103USWCN1DV1_Assignment#page111.tif
source=VPI_09_103USWCN1DV1_Assignment#page112.tif
source=VPI_09_103USWCN1DV1_Assignment#page113.tif
source=VPI_09_103USWCN1DV1_Assignment#page114.tif
source=VPI_09_103USWCN1DV1_Assignment#page115.tif
source=VPI_09_103USWCN1DV1_Assignment#page116.tif
source=VPI_09_103USWCN1DV1_Assignment#page117.tif
source=VPI_09_103USWCN1DV1_Assignment#page118.tif
source=VPI_09_103USWCN1DV1_Assignment#page119.tif
source=VPI_09_103USWCN1DV1_Assignment#page120.tif
source=VPI_09_103USWCN1DV1_Assignment#page121.tif

source=VPI_09_103USWCN1DV1_Assignment#page122.tif
source=VPI_09_103USWCN1DV1_Assignment#page123.tif
source=VPI_09_103USWCN1DV1_Assignment#page124.tif
source=VPI_09_103USWCN1DV1_Assignment#page125.tif
source=VPI_09_103USWCN1DV1_Assignment#page126.tif
source=VPI_09_103USWCN1DV1_Assignment#page127.tif
source=VPI_09_103USWCN1DV1_Assignment#page128.tif
source=VPI_09_103USWCN1DV1_Assignment#page129.tif
source=VPI_09_103USWCN1DV1_Assignment#page130.tif
source=VPI_09_103USWCN1DV1_Assignment#page131.tif
source=VPI_09_103USWCN1DV1_Assignment#page132.tif
source=VPI_09_103USWCN1DV1_Assignment#page133.tif
source=VPI_09_103USWCN1DV1_Assignment#page134.tif

ASSIGNMENT

We,

- (1) Paul Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Randy S. Bethiel, of Lexington, Massachusetts;
- (5) John J. Court, of Littleton, Massachusetts;
- (6) Hongbo Deng, of Southborough, Massachusetts;
- (7) Ioana Drutu, of Watertown, Massachusetts;
- (8) John P. Duffy, of Northborough, Massachusetts;
- (9) Luc J. Farmer, of Foxboro, Massachusetts;
- (10) Huai Gao, of Arlington, Massachusetts;
- (11) Wenxin Gu, of Somerville, Massachusetts;
- (12) Dylan H. Jacobs, of Everett, Massachusetts;
- (13) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (14) Mark W. Ledeboer, of Acton, Massachusetts;
- (15) Brian Ledford, of Norton, Massachusetts;
- (16) François Maltais, of Tewksbury, Massachusetts;
- (17) Emanuele Perola, of Brookline, Massachusetts;
- (18) Tiansheng Wang, of Concord, Massachusetts;
- (19) M. Woods Wannamaker, of Bolton, Massachusetts;
- (20) Randal Byrn, of Wayland, Massachusetts;
- (21) Yi Zhou, of Lexington, Massachusetts;
- (22) Chao Lin, of Winchester, Massachusetts;
- (23) Min Jiang, of Lexington, Massachusetts;
- (24) Steven Jones, of Hyde Park, Massachusetts; and

(25) Ursula A. Germann, of Newton, 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: , and filed in the
United States Patent and Trademark Office on , under Application Number
¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and
divisions thereof, and any substitute applications therefor, and/or

(b) the International Patent Application entitled: INHIBITORS OF
INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the
United States Receiving Office on June 17, 2010, under Application No.
PCT/US2010/038988, 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;

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

(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):

61/187,713	US	June 17, 2009
Application No.	Country	Filing Date
61/287,781	US	December 18, 2009
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 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) Paul Charifson

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Paul Charifson, 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) Michael P. Clark

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Michael P. Clark, 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) Upul K. Bandarage

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Upul K. Bandarage, 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) Randy S. Bethiel

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Randy S. Bethiel, 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) John J. Court

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared John Court, 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) Hongbo Deng

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Hongbo Deng, 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) Ioana Drutu

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Ioana Drutu, 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) John P. Duffy

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared John P. Duffy, 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) Luc J. Farmer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Luc Farmer, 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) Huai Gao

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Huai Gao, 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) Wenxin Gu

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Wenxin Gu, 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) Dylan H. Jacobs

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Dylan Jacobs, 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: _____.

(13) Joseph M. Kennedy

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Joseph M. Kennedy, 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: _____.

(14) Mark W. Ledeboer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Mark W. Ledeboer, 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: _____.

(15) Brian Ledford

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Brian Ledford, 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: _____.

(16) François Maltais

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared François Maltais, 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: _____.

(17) Emanuele Perola

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Emanuele Perola, 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: _____.

(18) Tiansheng Wang

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2011, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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: _____.

(19) M. Woods Wannamaker

Date: _____

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

Randal Byrn

(20) Randal Byrn

Date: Dec 5, 2011

Commonwealth of Massachusetts

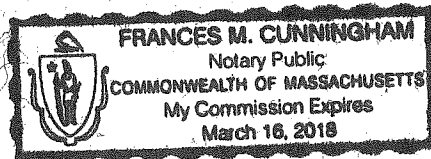
County of Middlesex

On this 5th day of December, 2011, before me, the undersigned notary public, personally appeared Randal Byrn, 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.





(21) Yi Zhou

Date: 8-30-2011

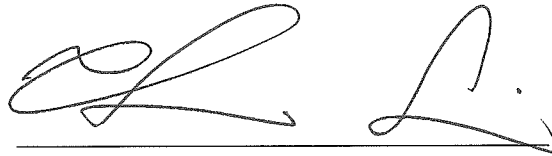
Commonwealth of Massachusetts

County of Middlesex

On this 30 day of August, 2011, before me, the undersigned notary public, personally appeared Yi Zhou, proved to me through satisfactory evidence of identification which was/were: ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) Yi Zhou, 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.

Kelly A. Donnelly
Notary Public

My Commission Expires: 6/25/15.



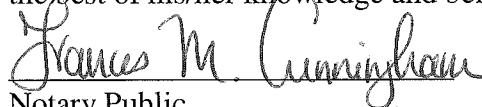
(22) Chao Lin

Date: August 29, 2011

Commonwealth of Massachusetts

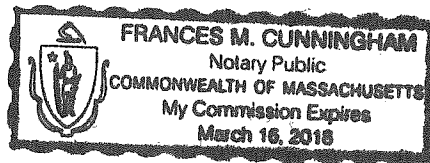
County of Middlesex

On this 29th day of August, 2011, before me, the undersigned notary public, personally appeared Chao Lin, 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



[Signature]

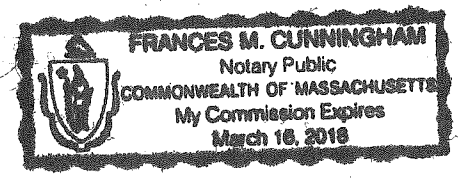
(23) Min Jiang

Date: 8/18/2011

Commonwealth of Massachusetts
County of Middlesex

On this 18th day of August, 2011, before me, the undersigned notary public, personally appeared Min Jiang, proved to me through satisfactory evidence of identification which was/were: ☐ personal knowledge of identity, ☐ a driver's license, ☒ other (please identify) FD Badge, 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.



A. H. Jones

(24) Steven Jones

Date: 18 Aug 2011

Commonwealth of Massachusetts

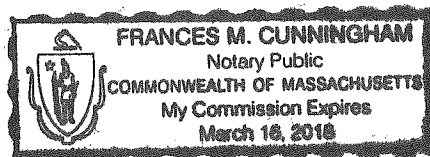
County of Middlesex

On this 18th day of August, 2011, before me, the undersigned notary public, personally appeared Steven Jones, 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



Ursula A. Germann

(25) Ursula A. Germann

Date: 19 August 2011

Commonwealth of Massachusetts

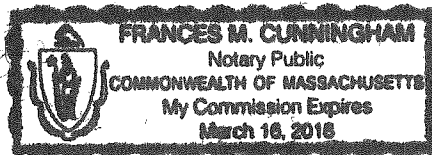
County of Middlesex

On this 19th day of August, 2011, before me, the undersigned notary public, personally appeared Ursula A. Germann, 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.

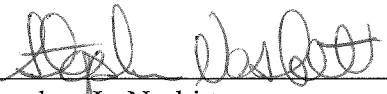
Frances M. Cunningham

Notary Public

My Commission Expires: 3/16/2018




ACKNOWLEDGMENT OF ASSIGNEE

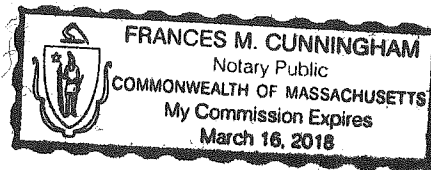
By: 
Stephen L. Nesbitt
Vice President & Chief Patent Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: December 6, 2011

Commonwealth of Massachusetts
County of Middlesex

On this 6th day of December, 2011, 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: 3/16/18.



ASSIGNMENT

We,

- (1) Paul Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Randy S. Bethiel, of Lexington, Massachusetts;
- (5) John J. Court, of Littleton, Massachusetts;
- (6) Hongbo Deng, of Southborough, Massachusetts;
- (7) Ioana Drutu, of Watertown, Massachusetts;
- (8) John P. Duffy, of Northborough, Massachusetts;
- (9) Luc J. Farmer, of Foxboro, Massachusetts;
- (10) Huai Gao, of Arlington, Massachusetts;
- (11) Wenxin Gu, of Somerville, Massachusetts;
- (12) Dylan H. Jacobs, of Everett, Massachusetts;
- (13) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (14) Mark W. Ledebor, of Acton, Massachusetts;
- (15) Brian Ledford, of Norton, Massachusetts;
- (16) François Maltais, of Tewksbury, Massachusetts;
- (17) Emanuele Perola, of Brookline, Massachusetts;
- (18) Tiansheng Wang, of Concord, Massachusetts; and
- (19) M. Woods Wannamaker, of Bolton, 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: , and filed in the United States Patent and Trademark Office on , under Application Number ¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

(b) the International Patent Application entitled: INHIBITORS OF INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the United States Receiving Office on June 17, 2010, under Application No. PCT/US2010/038988, 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,

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

in and to the above inventions, discoveries and applications including, but not limited to, the following priority application(s):

61/187,713	US	June 17, 2009
Application No.	Country	Filing Date
61/287,781	US	December 18, 2009
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 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) Paul Charifson

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Paul Charifson, 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) Michael P. Clark

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Michael P. Clark, 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) Upul K. Bandarage

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Upul K. Bandarage, 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) Randy S. Bethiel

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Randy S. Bethiel, 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) John J. Court

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John Court, 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: _____.

Deng
(6) Hongbo Deng

Date: 08/30/2010

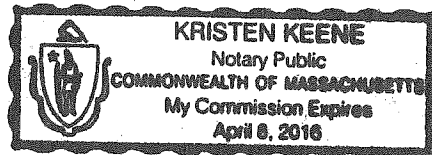
Commonwealth of Massachusetts

County of Middlesex

On this 30th day of August, 2010, before me, the undersigned notary public, personally appeared Hongbo Deng, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



Drutu

(7) Ioana Drutu

Date: 08/30/2010

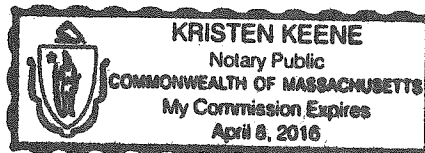
Commonwealth of Massachusetts

County of Middlesex

On this 30th day of August, 2010, before me, the undersigned notary public, personally appeared Ioana Drutu, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016



(8) John P. Duffy

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John P. Duffy, 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) Luc J. Farmer

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Luc Farmer, 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) Huai Gao

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Huai Gao, 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) Wenxin Gu

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Wenxin Gu, 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) Dylan H. Jacobs

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Dylan Jacobs, 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: _____.

(13) Joseph M. Kennedy

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Joseph Kennedy, 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: _____.

(14) Mark W. Ledeboer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Mark W. Ledeboer, 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: _____.

(15) Brian Ledford

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Brian Ledford, 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: _____.

(16) François Maltais

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared François Maltais, 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: _____.

(17) Emanuele Perola

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Emanuele Perola, 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: _____.

(18) Tiansheng Wang

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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: _____.

(19) M. Woods Wannamaker

Date: _____

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

ACKNOWLEDGMENT OF ASSIGNEE

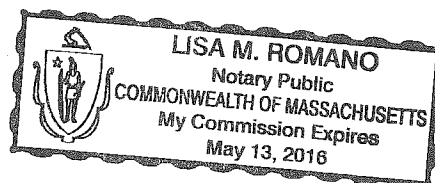
By: *Stephen L. Nesbitt*
Stephen L. Nesbitt
Chief Patent Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: *September 19, 2010*

Commonwealth of Massachusetts
County of Middlesex

On this *10th* day of *Sept*, 2010, 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.

Lisa Romano
Notary Public : *Lisa Romano*
My Commission Expires: *5-13-2016*



ASSIGNMENT

We,

- (1) Paul Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Randy S. Bethiel, of Lexington, Massachusetts;
- (5) John J. Court, of Littleton, Massachusetts;
- (6) Hongbo Deng, of Southborough, Massachusetts;
- (7) Ioana Drutu, of Watertown, Massachusetts;
- (8) John P. Duffy, of Northborough, Massachusetts;
- (9) Luc J. Farmer, of Foxboro, Massachusetts;
- (10) Huai Gao, of Arlington, Massachusetts;
- (11) Wenxin Gu, of Somerville, Massachusetts;
- (12) Dylan H. Jacobs, of Everett, Massachusetts;
- (13) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (14) Mark W. Ledebor, of Acton, Massachusetts;
- (15) Brian Ledford, of Norton, Massachusetts;
- (16) François Maltais, of Tewksbury, Massachusetts;
- (17) Emanuele Perola, of Brookline, Massachusetts;
- (18) Tiansheng Wang, of Concord, Massachusetts; and
- (19) M. Woods Wannamaker, of Bolton, 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: , and filed in the United States Patent and Trademark Office on , under Application Number ¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

(b) the International Patent Application entitled: INHIBITORS OF INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the United States Receiving Office on June 17, 2010, under Application No. PCT/US2010/038988, 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

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

(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):

61/187,713	US	June 17, 2009
Application No.	Country	Filing Date
61/287,781	US	December 18, 2009
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 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) Paul Charifson

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Paul Charifson, 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) Michael P. Clark

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Michael P. Clark, 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) Upul K. Bandarage

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Upul K. Bandarage, 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) Randy S. Bethiel

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Randy S. Bethiel, 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) John J. Court

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John Court, 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) Hongbo Deng

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Hongbo Deng, 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) Ioana Drutu

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Ioana Drutu, 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) John P. Duffy

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John P. Duffy, 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) Luc J. Farmer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Luc Farmer, 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) Huai Gao

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Huai Gao, 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) Wenxin Gu

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Wenxin Gu, 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) Dylan H. Jacobs

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Dylan Jacobs, 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: _____.

(13) Joseph M. Kennedy

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Joseph Kennedy, 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: _____.

(14) Mark W. Ledeboer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Mark W. Ledeboer, 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: _____.

(15) Brian Ledford

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Brian Ledford, 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: _____.

(16) François Maltais

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared François Maltais, 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: _____.

(17) Emanuele Perola

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Emanuele Perola, 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: _____.

(18) Tiansheng Wang

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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: _____.

M. Woods Wannamaker

(19) M. Woods Wannamaker

Date:

July 26, 2010

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness:

Rose Persichetti

Printed Name of Witness:

Rose Persichetti

this 26th day of

July, 2010

Date of signing

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness:

Maureen D. Dwyer

Printed Name of Witness:

Maureen D. Dwyer

this 26 day of

July 2010

Date of signing

ACKNOWLEDGMENT OF ASSIGNEE

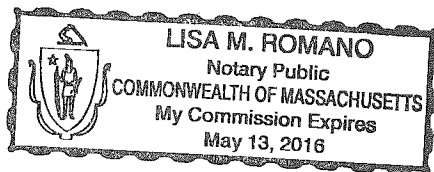
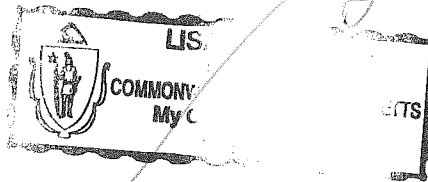
By: Stephen L. Nesbitt
Stephen L. Nesbitt
Chief Patent Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: September 10, 2010

Commonwealth of Massachusetts
County of Middlesex

On this 10th day of Sept, 2010, 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.

Lisa M. Romano
Notary Public: Lisa M. Romano
My Commission Expires: 5-13-2016



ASSIGNMENT

We,

- (1) Paul Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Randy S. Bethiel, of Lexington, Massachusetts;
- (5) John J. Court, of Littleton, Massachusetts;
- (6) Hongbo Deng, of Southborough, Massachusetts;
- (7) Ioana Drutu, of Watertown, Massachusetts;
- (8) John P. Duffy, of Northborough, Massachusetts;
- (9) Luc J. Farmer, of Foxboro, Massachusetts;
- (10) Huai Gao, of Arlington, Massachusetts;
- (11) Wenxin Gu, of Somerville, Massachusetts;
- (12) Dylan H. Jacobs, of Everett, Massachusetts;
- (13) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (14) Mark W. Ledboer, of Acton, Massachusetts;
- (15) Brian Ledford, of Norton, Massachusetts;
- (16) François Maltais, of Tewksbury, Massachusetts;
- (17) Emanuele Perola, of Brookline, Massachusetts;
- (18) Tiansheng Wang, of Concord, Massachusetts; and
- (19) M. Woods Wannamaker, of Bolton, 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: , and filed in the United States Patent and Trademark Office on , under Application Number ¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

(b) the International Patent Application entitled: INHIBITORS OF INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the United States Receiving Office on June 17, 2010, under Application No. PCT/US2010/038988, 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

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

(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):

61/187,713	US	June 17, 2009
Application No.	Country	Filing Date
61/287,781	US	December 18, 2009
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 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.

Paul Charifson

(1) Paul Charifson

Date: Aug. 18, 2016

Commonwealth of Massachusetts

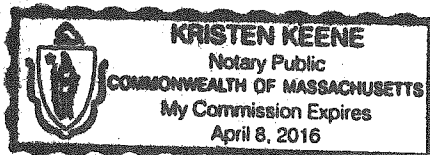
County of Middlesex

On this 18th day of August, 2010, before me, the undersigned notary public, personally appeared Paul Charifson, 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.

Kristen Keene

Notary Public

My Commission Expires: 4/8/2016.



[Signature]

(2) Michael P. Clark

Date: Aug -17-2010

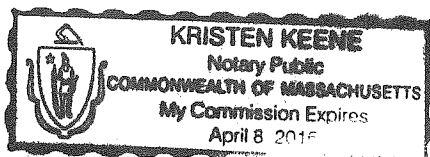
Commonwealth of Massachusetts

County of Middlesex

On this 17th day of August, 2010, before me, the undersigned notary public, personally appeared Michael P. Clark, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



Upul K. Bandarage

(3) Upul K. Bandarage

Date: 08/23/2010

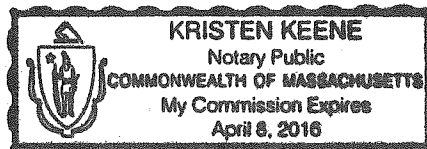
Commonwealth of Massachusetts

County of Middlesex

On this 23rd day of August, 2010, before me, the undersigned notary public, personally appeared Upul K. Bandarage, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



Randy S. Bethiel

(4) Randy S. Bethiel

Date: 08/16/10

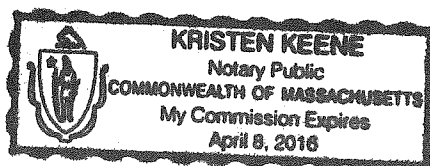
Commonwealth of Massachusetts

County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Randy S. Bethiel, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



John J. Court

(5) John J. Court

Date: 8/16/2010

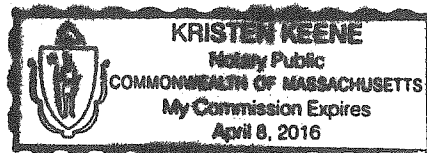
Commonwealth of Massachusetts

County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared John Court, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



(6) Hongbo Deng

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Hongbo Deng, 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) Ioana Drutu

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Ioana Drutu, 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. Duffy

(8) John P. Duffy

Date: 8/16/10

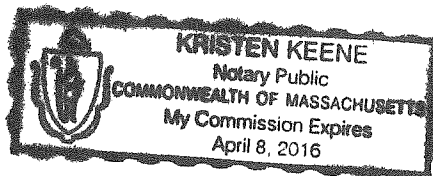
Commonwealth of Massachusetts

County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared John P. Duffy, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.



Luc Farmer

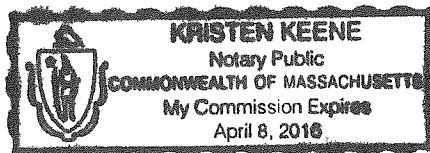
(9) Luc J. Farmer

Date: 8/16/2010

Commonwealth of Massachusetts
County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Luc Farmer, 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.

Kristen Keene
Notary Public
My Commission Expires: 4/8/2016.



Huai Gao

(10) Huai Gao

Date: 08/16/2010

Commonwealth of Massachusetts

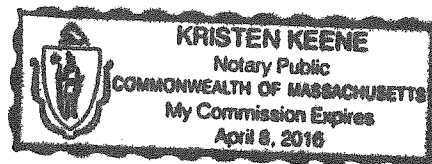
County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Huai Gao, 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.

Kristen Keene

Notary Public

My Commission Expires: 4/8/2016.



Guwen

(11) Wenxin Gu

Date: 8/18/2010

Commonwealth of Massachusetts

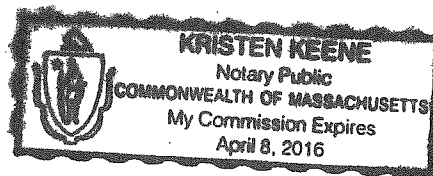
County of Middlesex

On this 18th day of August, 2010, before me, the undersigned notary public, personally appeared Wenxin Gu, 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.

Kristen Keene

Notary Public

My Commission Expires: 4/8/2016



Dylan Jacobs
(12) Dylan H. Jacobs

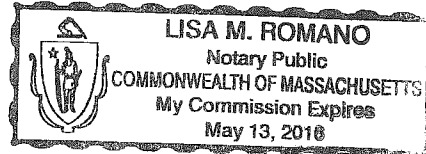
Date: 9/9/10

Commonwealth of Massachusetts

County of Middlesex

On this 9th day of Sept, 2010, before me, the undersigned notary public, personally appeared Dylan Jacobs, 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.

Lisa M. Romano
Notary Public Lisa M. Romano
My Commission Expires: 5-13-2016



Joseph M. Kennedy

(13) Joseph M. Kennedy

Date: 8/16/10

Commonwealth of Massachusetts

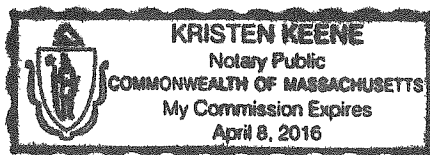
County of Middlesex

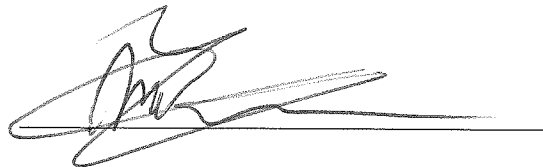
On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Joseph Kennedy, proved to me through satisfactory evidence of identification which was/were: ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose 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.

Kristen Keene

Notary Public

My Commission Expires: 4/8/2016.





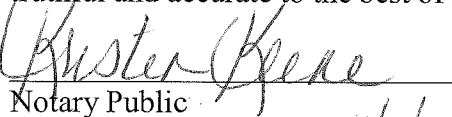
(14) Mark W. Ledeboer

Date: 8/16/2010

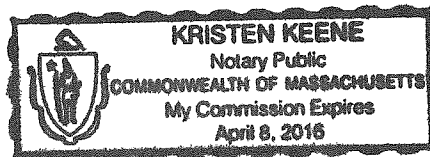
Commonwealth of Massachusetts

County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Mark W. Ledeboer, 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: 4/8/2016



BLL

(15) Brian Ledford

Date: 8-16-2010

Commonwealth of Massachusetts

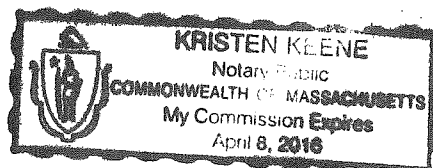
County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared Brian Ledford, 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.

Kristen Keene

Notary Public

My Commission Expires: 4/8/2016



François Maltais

(16) François Maltais

Date: 8/16/10

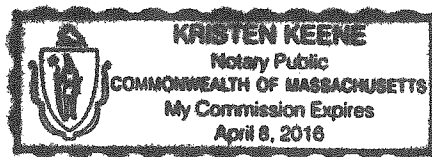
Commonwealth of Massachusetts

County of Middlesex

On this 16th day of August, 2010, before me, the undersigned notary public, personally appeared François Maltais, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016



Emanuele Perola

(17) Emanuele Perola

Date: 8/17/2010

Commonwealth of Massachusetts


County of Middlesex

On this 17th day of August, 2010, before me, the undersigned notary public, personally appeared Emanuele Perola, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016





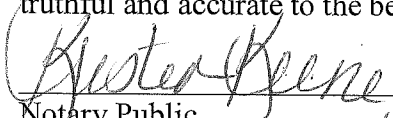
(18) Tiansheng Wang

Date: 8/17/2010

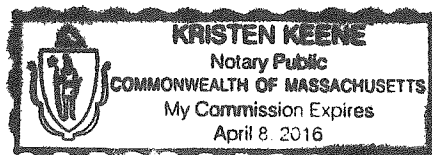
Commonwealth of Massachusetts

County of Middlesex

On this 17th day of August, 2010, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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: 4/8/2016



(19) M. Woods Wannamaker

Date: _____

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

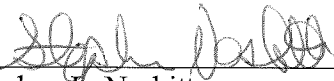
IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

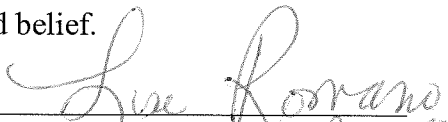
ACKNOWLEDGMENT OF ASSIGNEE

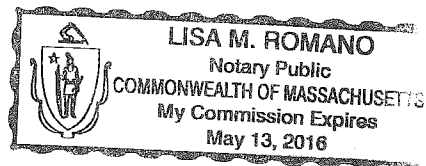
By: 
Stephen L. Nesbitt
Chief Patent Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: September 10, 2010

Commonwealth of Massachusetts
County of Middlesex

On this 10th day of Sept, 2010, 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: Lisa M. Romano
My Commission Expires: 5-13-2016



ASSIGNMENT

I,

(1) Ann Dak-Yee Kwong, of Cambridge, 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 the application
for United States Letters Patent entitled: INHIBITORS OF INFLUENZA VIRUSES
REPLICATION, and filed in the United States Patent and Trademark Office on December 6,
2013, under Application Number 14/098,867, 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>13/327,206</u>	<u>US</u>	<u>December 15, 2011</u>
Application No.	Country	Filing Date
<u>PCT/US2010/038988</u>	<u>US</u>	<u>June 17, 2010</u>
Application No.	Country	Filing Date
<u>61/287,781</u>	<u>US</u>	<u>December 18, 2009</u>
Application No.	Country	Filing Date
<u>61/187,713</u>	<u>US</u>	<u>June 17, 2009</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 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.

Ann Dak-Yee Kwong

(1) Ann Dak-Yee Kwong

Date: 3/14/14

Commonwealth of Massachusetts
County of Suffolk

On this 14 day of MARCH, 2014, before me, the undersigned notary public, personally appeared Ann Dak-Yee Kwong, proved to me through satisfactory evidence of identification which was/were: ☐ personal knowledge of identity, ☒ a driver's license, ☐ other (please identify) MA DR. VERASE, 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.

Armen Makaryan
Notary Public

My Commission Expires: 1/25/2019



ACKNOWLEDGMENT OF ASSIGNEE

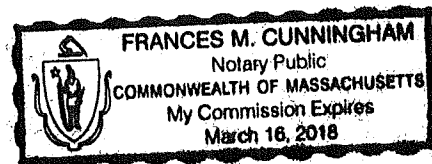
By: Kerry A. Flynn
Kerry A. Flynn
Vice President and Chief IP Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: March 27, 2014

Commonwealth of Massachusetts
County of Suffolk

On this 27th day of March, 2014, 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.

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



ASSIGNMENT

We,

- (1) Paul Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Randy S. Bethiel, of Lexington, Massachusetts;
- (5) John J. Court, of Littleton, Massachusetts;
- (6) Hongbo Deng, of Southborough, Massachusetts;
- (7) Ioana Drutu, of Watertown, Massachusetts;
- (8) John P. Duffy, of Northborough, Massachusetts;
- (9) Luc J. Farmer, of Foxboro, Massachusetts;
- (10) Huai Gao, of Arlington, Massachusetts;
- (11) Wenxin Gu, of Somerville, Massachusetts;
- (12) Dylan H. Jacobs, of Everett, Massachusetts;
- (13) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (14) Mark W. Ledeboer, of Acton, Massachusetts;
- (15) Brian Ledford, of Norton, Massachusetts;
- (16) François Maltais, of Tewksbury, Massachusetts;
- (17) Emanuele Perola, of Brookline, Massachusetts;
- (18) Tiansheng Wang, of Concord, Massachusetts;
- (19) M. Woods Wannamaker, of Bolton, Massachusetts;
- (20) Randal Byrn, of Wayland, Massachusetts;
- (21) Yi Zhou, of Lexington, Massachusetts;
- (22) Chao Lin, of Winchester, Massachusetts;
- (23) Min Jiang, of Lexington, Massachusetts;
- (24) Steven Jones, of Hyde Park, Massachusetts;

(25) Ursula A. Germann, of Newton, Massachusetts; and

(26) Francesco G. Salituro, of Marlborough, 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: , and filed in the United States Patent and Trademark Office on , under Application Number ¹, including any renewals, revivals, reissues, reexaminations, extensions, continuations, and divisions thereof, and any substitute applications therefor, and/or

(b) the International Patent Application entitled: INHIBITORS OF INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the United States Receiving Office on June 17, 2010, under Application No. PCT/US2010/038988, 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;

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

(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):

61/187,713	US	June 17, 2009
Application No.	Country	Filing Date
61/287,781	US	December 18, 2009
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 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) Paul Charifson

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Paul Charifson, 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) Michael P. Clark

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Michael P. Clark, 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) Upul K. Bandarage

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Upul K. Bandarage, 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) Randy S. Bethiel

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Randy S. Bethiel, 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) John J. Court

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John Court, 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) Hongbo Deng

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Hongbo Deng, 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) Ioana Drutu

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Ioana Drutu, 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) John P. Duffy

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared John P. Duffy, 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) Luc J. Farmer

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Luc Farmer, 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) Huai Gao

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Huai Gao, 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) Wenxin Gu

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Wenxin Gu, 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) Dylan H. Jacobs

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Dylan Jacobs, 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: _____.

(13) Joseph M. Kennedy

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Joseph Kennedy, 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: _____.

(14) Mark W. Ledeboer

Date: _____

Commonwealth of Massachusetts
County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Mark W. Ledeboer, 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:_____.

(15) Brian Ledford

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Brian Ledford, 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:_____.

(16) François Maltais

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared François Maltais, 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: _____.

(17) Emanuele Perola

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Emanuele Perola, 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: _____.

(18) Tiansheng Wang

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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: _____.

(19) M. Woods Wannamaker

Date: _____

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: _____

Printed Name of Witness: _____

this ____ day of _____
Date of signing

(20) Randal Byrn

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Randal Byrn, 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: _____.

(21) Yi Zhou

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Yi Zhou, 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: _____.

(22) Chao Lin

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Chao Lin, 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: _____.

(23) Min Jian

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Min Jiang, 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: _____.

(24) Steven Jones

Date: _____

Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Steven Jones, 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: _____.

(25) Ursula A. Germann

Date: _____

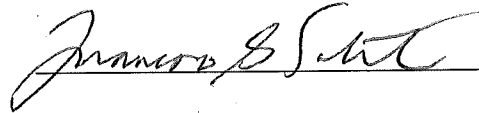
Commonwealth of Massachusetts

County of _____

On this _____ day of _____, 2010, before me, the undersigned notary public, personally appeared Tiansheng Wang, 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

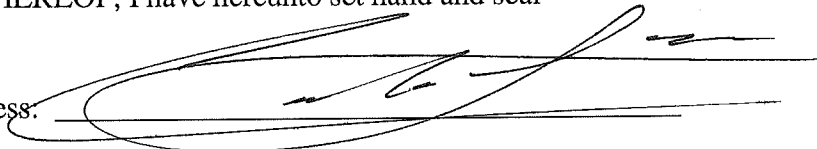
My Commission Expires: _____.



(26) Francesco G. Salituro

Date: 5-7-2013

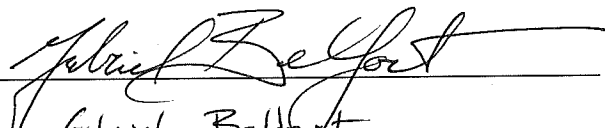
IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: 

Printed Name of Witness: Carlos Loya

this 7 day of May 2013
Date of signing


IN WITNESS WHEREOF, I have hereunto set hand and seal

Signature of witness: 

Printed Name of Witness: Gabriel Bellet

this 7 day of May 2013
Date of signing

ACKNOWLEDGMENT OF ASSIGNEE

By: 
Stephen L. Nesbitt
Vice President & Chief IP Counsel
VERTEX PHARMACEUTICALS INCORPORATED

Date: May 29, 2013

Commonwealth of Massachusetts
County of Middlesex

On this 29th day of May, 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.

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

