

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT																												
NATURE OF CONVEYANCE:	ASSIGNMENT																												
CONVEYING PARTY DATA																													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr><td>Paul S. Charifson</td><td>05/08/2013</td></tr> <tr><td>Michael P. Clark</td><td>05/08/2013</td></tr> <tr><td>Upul K. Bandarage</td><td>05/08/2013</td></tr> <tr><td>Ioana Davies</td><td>05/15/2013</td></tr> <tr><td>John P. Duffy</td><td>05/09/2013</td></tr> <tr><td>Huai Gao</td><td>05/08/2013</td></tr> <tr><td>Jun Feng</td><td>05/08/2013</td></tr> <tr><td>Jianglin Liang</td><td>05/08/2013</td></tr> <tr><td>Joseph M. Kennedy</td><td>05/08/2013</td></tr> <tr><td>Mark W. Ledeboer</td><td>05/08/2013</td></tr> <tr><td>Brian Ledford</td><td>05/08/2013</td></tr> <tr><td>Francois Maltais</td><td>05/08/2013</td></tr> <tr><td>Emanuele Perola</td><td>05/08/2013</td></tr> </tbody> </table>		Name	Execution Date	Paul S. Charifson	05/08/2013	Michael P. Clark	05/08/2013	Upul K. Bandarage	05/08/2013	Ioana Davies	05/15/2013	John P. Duffy	05/09/2013	Huai Gao	05/08/2013	Jun Feng	05/08/2013	Jianglin Liang	05/08/2013	Joseph M. Kennedy	05/08/2013	Mark W. Ledeboer	05/08/2013	Brian Ledford	05/08/2013	Francois Maltais	05/08/2013	Emanuele Perola	05/08/2013
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<table border="1"> <tr><td>Name:</td><td>Vertex Pharmaceuticals Incorporated</td></tr> <tr><td>Street Address:</td><td>130 Waverly Street</td></tr> <tr><td>City:</td><td>Cambridge</td></tr> <tr><td>State/Country:</td><td>MASSACHUSETTS</td></tr> <tr><td>Postal Code:</td><td>02139</td></tr> </table>		Name:	Vertex Pharmaceuticals Incorporated	Street Address:	130 Waverly Street	City:	Cambridge	State/Country:	MASSACHUSETTS	Postal Code:	02139																		
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CORRESPONDENCE DATA																													
Fax Number: 6173416483 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 617-341-6100																													

CH \$40.00 13918048

Email: Carolyn_Anderson@vrtx.com
Correspondent Name: Vertex Pharmaceuticals Incorporated
Address Line 1: 130 Waverly Street
Address Line 4: Cambridge, MASSACHUSETTS 02139

ATTORNEY DOCKET NUMBER: VPI/10-157 USW CN1

NAME OF SUBMITTER: Carolyn Anderson

Signature: /Carolyn Anderson/

Date: 07/18/2013

Total Attachments: 17

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ASSIGNMENT

We,

- (1) Paul S. Charifson, of Framingham, Massachusetts;
- (2) Michael P. Clark, of Concord, Massachusetts;
- (3) Upul K. Bandarage, of Lexington, Massachusetts;
- (4) Iona Davies, of Arlington, Massachusetts;
- (5) John P. Duffy, of Northborough, Massachusetts;
- (6) Huai Gao, of Arlington, Massachusetts;
- (7) Jun Feng, of Acton, Massachusetts;
- (8) Jianglin Liang, of Needham, Massachusetts;
- (9) Joseph M. Kennedy, of Charlestown, Massachusetts;
- (10) Mark W. Ledeboer, of Acton, Massachusetts;
- (11) Brian Ledford, of Norton, Massachusetts;
- (12) Francois Maltais, of Tewksbury, Massachusetts; and
- (13) Emanuele Perola, of Brookline, 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 International Patent Application entitled: INHIBITORS OF INFLUENZA VIRUSES REPLICATION, filed under the Patent Cooperation Treaty in the United States Receiving Office on December 16, 2011, under Application No. PCT/US2011/065371, and

designating all countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefor;

(2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my/our names at the election of the ASSIGNEE or its designee, on the aforesaid inventions, discoveries and applications in the United States and in any other country of the world;

(3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any other country of the world, and in and to any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof; and

(4) the entire right, title and interest in and to all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications including, but not limited to, the following priority application(s):

61/527,273	US	August 25, 2011
Application No.	Country	Filing Date
61/423,943	US	December 16, 2010
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 S. Charifson

(1) Paul S. Charifson

Date: May 8, 2013

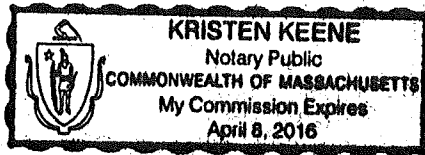
Commonwealth of Massachusetts

County of Middlesex

On this 8 day of May, 2013, before me, the undersigned notary public, personally appeared Paul S. 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.



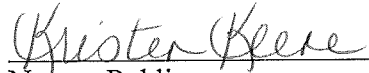


(2) Michael P. Clark

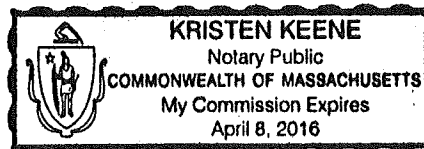
Date: May-08-2013

Commonwealth of Massachusetts
County of Middlesex

On this 8 day of May, 2013, 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: 4/8/2016.





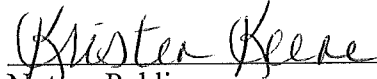
(3) Upul K. Bandarage

Date: 05.08.2013

Commonwealth of Massachusetts

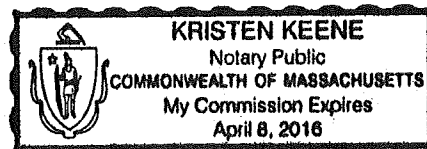
County of Middlesex

On this 8 day of May, 2013, 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: 4/8/2016.



Davies

(4) Ioana Davies

Date: 05/15/2013

Commonwealth of Massachusetts

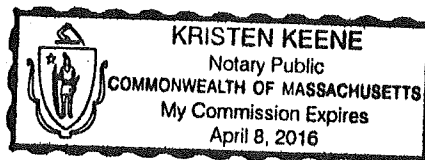
County of Middlesex

On this 15 day of May, 2013, before me, the undersigned notary public, personally appeared Ioana Davies, 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





(5) John P. Duffy

Date:

5/9/13

Commonwealth of Massachusetts

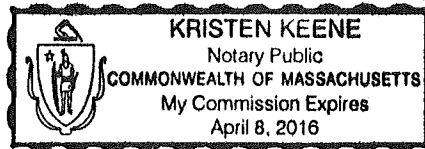
County of Middlesex

On this 9 day of May, 2013, 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: 4/8/2016



[Signature]

(6) Huai Gao

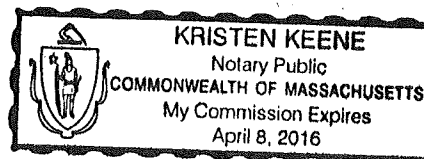
Date: 5/8/2013

Commonwealth of Massachusetts
County of Middlesex

On this 8 day of May, 2013, 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.

[Signature: Kristen Keene]
Notary Public

My Commission Expires: 4/8/2016.



Feng Jun

(7) Jun Feng

Date: 05/08/2013

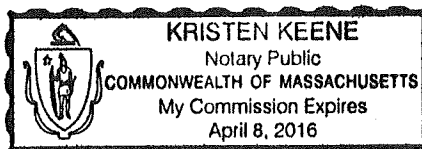
Commonwealth of Massachusetts

County of Middlesex

On this 8 day of May, 2013, before me, the undersigned notary public, personally appeared Jun Feng, 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



1782

(8) Jianglin Liang

Date: 05/08/2013

Commonwealth of Massachusetts

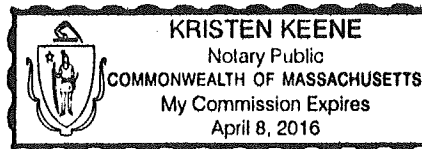
County of Middlesex

On this 8 day of May, 2013, before me, the undersigned notary public, personally appeared Jianglin Liang, 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.



Joseph M. Kennedy

(9) Joseph M. Kennedy

Date: 05/08/13

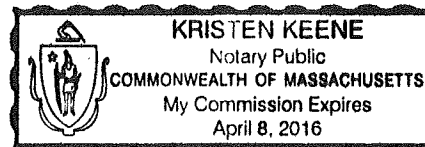
Commonwealth of Massachusetts

County of Middlesex

On this 8 day of May, 2013, 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.

Kristen Keene
Notary Public

My Commission Expires: 4/8/2016.





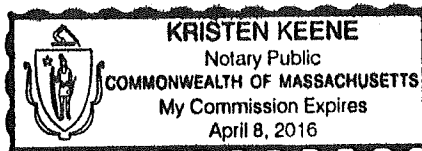
(10) Mark W. Ledeboer


Date: 5/8/13

Commonwealth of Massachusetts
County of Middlesex

On this 8 day of May, 2013, 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.

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



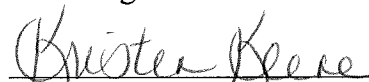

(11) Brian Ledford

Date: 5-08-2013

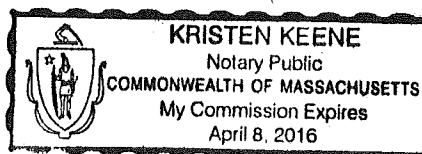
Commonwealth of Massachusetts

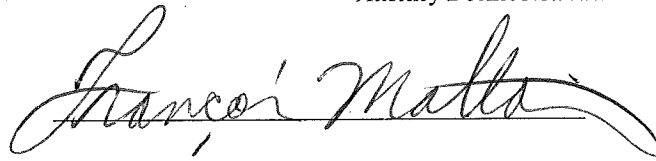
County of Middlesex

On this 8 day of May, 2013, 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: 4/8/2016



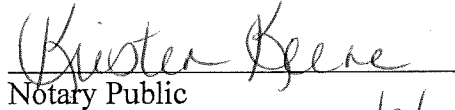


(12) Francois Maltais

Date: 05/08/13

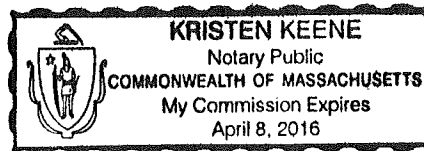
Commonwealth of Massachusetts
County of Middlesex

On this 8 day of May, 2013, before me, the undersigned notary public, personally appeared Francois 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: 4/8/2016



Emanuele Perola

(13) Emanuele Perola

Date: 5/8/2013

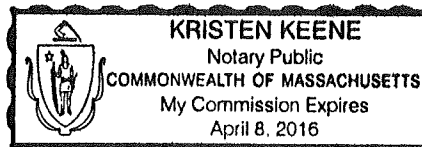
Commonwealth of Massachusetts

County of Middlesex

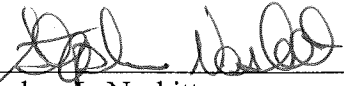
On this 8 day of May, 2013, before me, the undersigned notary public, personally appeared Emanuele Perola, proved to me through satisfactory evidence of identification which was/were: ☒ personal knowledge of identity, ☐ a driver's license, ☐ other (please identify) _____, to be the person whose name 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.



ACKNOWLEDGMENT OF ASSIGNEE

By: 
Stephen L. Nesbitt
Vice President and 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

