PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2941018

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YOUNG SHIN CHO	10/11/2012
JULIAN ROY LEVELL	10/11/2012
BAKARY-BARRY TOURE	10/11/2012
FAN YANG	10/12/2012
THOMAS CAFERRO	10/11/2012
FRANCOIS LENOIR	10/11/2012
GANG LIU	10/11/2012
MARK G PALERMO	10/16/2012
TROY D SMITH	10/11/2012
HUANGSHU LEI	12/03/2012
MICHAEL DAVID SHULTZ	12/04/2012

RECEIVING PARTY DATA

Name:	NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.
Street Address:	250 MASSACHUSETTS AVENUE
City:	CAMBRIDGE
State/Country:	MASSACHUSETTS
Postal Code:	02139

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	14347481
PCT Number:	IB2012055133

CORRESPONDENCE DATA

Fax Number:

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

Email: robert.sweeney@novartis.com

Correspondent Name: ROBERT SWEENEY

Address Line 1: 220 MASSACHUSETTS AVENUE

Address Line 4: CAMBRIDGE, MASSACHUSETTS 02139

ATTORNEY DOCKET NUMBER: PAT054800-US-PCT

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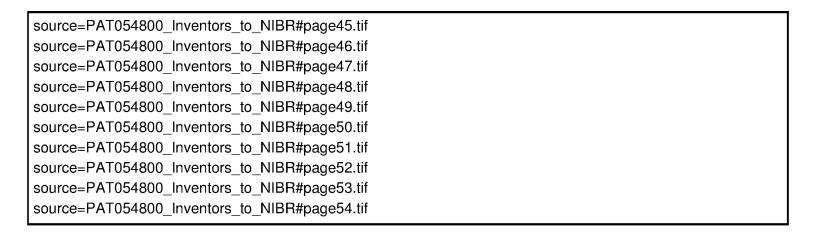
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NAME OF SUBMITTER:	ROBERT C. SWEENEY
SIGNATURE:	/Robert C. Sweeney/
DATE SIGNED:	07/16/2014

Total Attachments: 54 source=PAT054800 Inventors to NIBR#page1.tif source=PAT054800 Inventors to NIBR#page2.tif source=PAT054800 Inventors to NIBR#page3.tif source=PAT054800 Inventors to NIBR#page4.tif source=PAT054800 Inventors to NIBR#page5.tif source=PAT054800 Inventors to NIBR#page6.tif source=PAT054800 Inventors to NIBR#page7.tif source=PAT054800 Inventors to NIBR#page8.tif source=PAT054800 Inventors to NIBR#page9.tif source=PAT054800 Inventors to NIBR#page10.tif source=PAT054800_Inventors_to_NIBR#page11.tif source=PAT054800 Inventors to NIBR#page12.tif source=PAT054800 Inventors to NIBR#page13.tif source=PAT054800 Inventors to NIBR#page14.tif source=PAT054800 Inventors to NIBR#page15.tif source=PAT054800 Inventors to NIBR#page16.tif source=PAT054800 Inventors to NIBR#page17.tif source=PAT054800 Inventors to NIBR#page18.tif source=PAT054800 Inventors to NIBR#page19.tif source=PAT054800 Inventors to NIBR#page20.tif source=PAT054800 Inventors to NIBR#page21.tif source=PAT054800 Inventors to NIBR#page22.tif source=PAT054800 Inventors to NIBR#page23.tif source=PAT054800 Inventors to NIBR#page24.tif source=PAT054800 Inventors to NIBR#page25.tif source=PAT054800 Inventors to NIBR#page26.tif source=PAT054800 Inventors to NIBR#page27.tif source=PAT054800 Inventors to NIBR#page28.tif source=PAT054800_Inventors_to_NIBR#page29.tif source=PAT054800 Inventors to NIBR#page30.tif source=PAT054800 Inventors to NIBR#page31.tif source=PAT054800_Inventors_to_NIBR#page32.tif source=PAT054800_Inventors_to_NIBR#page33.tif source=PAT054800 Inventors to NIBR#page34.tif source=PAT054800 Inventors to NIBR#page35.tif source=PAT054800 Inventors to NIBR#page36.tif source=PAT054800 Inventors to NIBR#page37.tif source=PAT054800 Inventors to NIBR#page38.tif source=PAT054800 Inventors to NIBR#page39.tif source=PAT054800_Inventors_to_NIBR#page40.tif source=PAT054800 Inventors to NIBR#page41.tif source=PAT054800 Inventors to NIBR#page42.tif source=PAT054800 Inventors to NIBR#page43.tif source=PAT054800 Inventors to NIBR#page44.tif

PATENT

REEL: 033325 FRAME: 0019



ASSIGNMENT

This Assignment Agreement is entered into by and between

Young Shin CHO	citizen of South Korea / Republic of Korea	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Julian Roy LEVELL	citizen of United Kingdom	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		us
Bakary-Barry TOURE	citizen of Canada	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		US
Fan YANG	citizen of China	Novartis Institutes for BioMedical Research, Inc.
		250 Massachuseits Avenue
		Cambridge, MA 02139
		us
Thomas CAFERRO	citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Huangshu LEI	citizen of Canada	No.565, Tushan Rd., Nan'an District, Chongqing, P.R.China, 400061
Francois LENOIR	citizen of Canada	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Gang LIU	citizen of China	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA

Mark G. PALERMO	citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.	
		250 Massachusetts Avenue	
		Cambridge, MA 02139	
		US	
Michael David SHULTZ citizen of United States of America		Novartis Institutes for BioMedical Research, Inc.	
		250 Massachusetts Avenue	
		Cambridge, MA 02139	
		USA	
Troy D. SMITH	citizen of United States of	Novartis Institutes for BioMedical	
Amer	America	Research, Inc.	
		250 Massachusetts Avenue	
		Cambridge, MA 02139	
		USA	

(hereinafter "Inventor(s)"), and Novartis Institutes for Biomedical Research Inc., 250 Massachusetts Ave, Cambridge, MA 02139, USA, a company organized under the laws of Delaware.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, **Novartis Institutes for Biomedical Research Inc.**, is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to Novartis Institutes for Biomedical Research Inc., and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

 all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

3-PYRIMIDIN-4-YL-OXAZOLIDIN-2-ONES AS INHIBITORS OF MUTANT IDH [Patent Application PAT054800]

and filed in the to be determined Office on to be determined, 20 to be determined and accorded Application Number to be determined and/or filed as a PCT International Application on September 26, 2012 and accorded International Patent Application Number

PCT/IB2012/055133; and/or filed in the United States Patent and Trademark Office on September 27, 2011 and accorded Application Number 61/539553;

- (2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);
- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals:
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be

granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

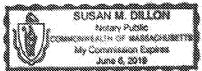
This Assignment shall be governed by the laws of Delaware.

This Assignment is effective as from the earliest priority date as stated above.

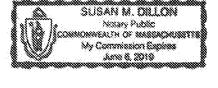
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Executed this day of		
BYY\Young Shin CHO		
ACKNOWLEDGEMENT		
State of Massachusetts		
State of Massachusetts) (S.S.: County of Middlesex)		
On this 11 day of Octobes personally appeared No. 15 State Cities through satisfactory evidence preceding or attached document, and acknow its stated purpose.	of identification, to be the person whose nat	igner), proved to mo which were me is signed on the
	ary Public	
My commission expires		
SUSAN M. COLLON 150 ary Public Commonstration or assumption 370 S. 2018		

Executed this 1 day of October , 2012	
BY Julian Roy LEVELL LS.	
ACKNOWLEDGEMENT State of Massachusetts)	
) \$.s.: County of Middlesex)	
On this 1/2 day of October , 20/3, before me, the undersignersonally appeared Julian Koy Levell (name of document signer through satisfactory evidence of identification, has a second for document, and acknowledged to me that (he) (she) signer	water were is signed on the
its stated purpose	
My commission expires 6/6/30/9	



Executed this _/ day of
BYLS. Bakary-Barry TOURE
ACKNOWLEDGEMENT
State of Massachusetts)
State of Massachusetts)) s.s.: County of Middlesex)
On this 11th day of October, 20, before me, the undersigned notary public personally appeared Parage Dany Toure (name of document signer), proved to me through satisfactory evidence of identification, which were the person whose name is signed on the person whose name is signed the person whose name is signed to the person whose
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily foits stated purpose.
My commission expires

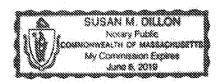


Executed this $\frac{\sqrt{3}}{2}$ day of $\frac{\sqrt{3}}{2}$,20/2	
BY Fan YANG	L.S.	
ACKNOWLEDGEMENT		
State of Massachusetts)		
State of Massachusetts)) s.s.: County of Middlesex)		
On this 13th day of <u>Cather</u> personally appeared <u>Face Yang</u> through satisfactory evidence	, 20 ¹³ , before me, the un	dersigned notary public, signer), proved to me
through satisfactory evidence	of identification,	which were
<u>Massachuseth (friver) ligerie</u> preceding or attached document, and acknow its stated purpose.	, to be the person whose viedged to me that (he) (she)	name is signed on the signed it voluntarily for
	lary Public	
My commission expires	Annumum	
	SUSAN N	I. DATON
COMMISSION CO. OF MISSACHUSET TO MY COMMISSION Explores	III (9) / councinescou à	F MAGINEPARTY P
June 6, 2018		. 2018

Executed this 11 day of Oct , 2017.
BY I L.S. Thomas CAFERRO L.S.
ACKNOWLEDGEMENT
State of Massachusetts)
State of Massachusetts)) s.s.: County of Middlesex)
On this 10th day of Carber , 2012, before me, the undersigned notary public, personally appeared Thomas Carero (name of document signer), proved to me through satisfactory evidence of identification, which were the person whose name is signed on the
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.
Juliana Mi Oullon Notary Public
My commission expires 6/6/2019 SUSAN IA DELON
Concension of managements 14 Constitute Expense Serie 6 5018

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Executed this	
BYL.S. Francois LENOIR	
ACKNOWLEDGEMENT State of Massachusetts)	
State of Massachusetts)) s.s.: County of Middlesex)	
On this 11 day of October 2019, before me, the under personally appeared Frances Length (name of document significance) satisfactory evidence of identification,	signed notary public, mer), proved to me which were to is signed on the
preceding or attached document, and acknowledged to me that (he) (she) sig its stated purpose.	ned it voluntarily for
يرين من المعلقة به المعلقة الم My commission expires	



Executed this day of	20 /
BY	L.S.
ACKNOWLEDGEMENT State of Massachusetts) s.s.: County of Middlesex)	
personally appeared through satisfactory evidence (1) 2550 2550 2550 2550 2550 2550 2550 255	, 20/3, before me, the undersigned notary public, (name of document signer), proved to me of identification, which were o be the person whose name is signed on the aged to me that (he) (she) signed it voluntarily for
My commission expires, Notary SUSAN M. CRILON VICENT PLANT AND CONTROL OF SUSANSIANTS My Control of Susansiants My Control of Susansiants My Control of Susansiants And Control of Susansiants And Control of Susansiants	'Public

Executed this
BYLS. Mark G. PALERMO
ACKNOWLEDGEMENT
State of Massachusetts)) s.s.: County of Middlesex)
On this 16^{36} day of $00000000000000000000000000000000000$
My commission expires 6/8/3019

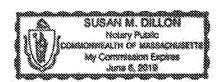
SUSAN M. DILLON Norwy Pubs: Norwealth of BASSASHEETI

My Commission Explise June 6, 2018



Executed this
BY VS. L.S. Troy D. SMITH
ACKNOWLEDGEMENT
State of Massachusetts)
State of Massachusetts) S.S.: County of Middlesex)
On this 1/2 day of October 300 sefore me, the undersigned notary public, personally appeared 1/200 serois (name of document signer), proved to me through satisfactory evidence of identification, which were 1/200 serois second second second second signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.
My commission expires <u>@/@/3@19</u>
SUSAN M. DILLON Receive Public Commonweal The Of Musicion METTS And B. 3018

Executed this, day of	
Novartis Institutes for Biomedical Research Inc.	
BY / LUL / LEC L.S. Name: Laura ryoddin Authorized Signatory and Power of Attorney	
ACKNOWLEDGEMENT State of Massachusetts)	
State of Massachusetts)) s.s.: County of Middlesex)	
On this 19 day of December , 20 , before me, the undersigned repersonally appeared 10,000 Market (name of document signer), p through satisfactory evidence of identification, which we have the person whose name is signed and or attached document, and acknowledged to me that (he) (she) signed it were the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person of the person whose name is signed as the person whose name i	gned on the
its stated purpose.	commonwest, sec
Notary Public , Notary Public	
My commission expires	



公证 书

中华人民共和国重庆市公证处

ASSIGNMENT

This Assignment Agreement is entered into by and between

Young Shir CHO	citizen of South Korea / Republic of Korea	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
ASST ROYLEVELL	citizen of United Kingdom	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		Us
Bakary-Barry TOURE	citizen of Canada	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		บร
an YANG	citizen of China	Novartis Institutes for BloMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		US
Thomas CAFERRO	citizen of United States of America	Novertis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
tengshu LEI	citizen of United States of America	No.566, Tushan Rd., Nan'an District, Chongqing, P.R.China, 400061
≇ æis LENOIR	cilizen of Canada	Novartis institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
	citizen of China	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
	Section 1997	USA
St.		

Mark G. PALERMO	citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
	:	us
Voruse David SHULTZ	citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
	. *** 	Cambridge, MA 02139
		USA
	citizen of United States of	Novariis Institutes for BioMedical
	America	Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA

(hereinafter "Inventor(s)"), and Novartis Institutes for Biomedical Research Inc., 250 Massachusetts Ave, Cambridge, MA 02139. USA, a company organized under the laws of Delaware.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, Novartis Institutes for Biomedical Research Inc., is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any samership right, title or interest in any of the items described herein (which I/We do not believe to see the case and make no claim in or to), for good and valuable consideration, the receipt and respect to Novartis Institutes for Biomedical Research Inc., and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled
3-PYRIMIDIN-4-YL-OXAZOLIDIN-2-ONES AS INHIBITORS OF MUTANT IDH
[Patent Application PAT054800]

and filed in the to be determined Office on to be determined, 20 to be determined and accorded Application Number to be determined and or filed as a PCT International Application on Sectember 26, 2012 and accorded International Patent Application Number PCT/IB2012/055133;

and/or filed in the United States Patent and Trademark Office on September 27, 2011 and accorded Application Number 61/539553;

- (2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);
- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or designees or in our/my name, at ASSIGNEE's election and in accordance with applicable in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and fivisionals such as, but not limited to, continuations of continuations and continuations of fivisionals:
- 6) all patents, utility models, or other grants that issue from any of the applications related to herein and all rights and remedies associated therewith including the right to sue for the past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting the infringement prior to issuance of the patent:
- 17 zil registrations and confirmations of and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be

granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the recessive but at the expense, of ASSIGNEE, execute and deliver all documents that may be recessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, research, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment shall be governed by the laws of Delaware.

This Assignment is effective as from the earliest priority date as stated above.

Executed this day of		, 20
BY Young Shin CHO	serak kanka alama an	L.S,
ACKNOWLEDGEMENT		
State of Massachusetts County of Middlesex)) s.s.:)	
On this day of personally appeared		
through satisfactory	evidence	of identification, which were to be the person whose name is signed on the
preceding or attached docume its stated purpose.	ent, and acknov	vledged to me that (he) (she) signed it voluntarily for
***************************************		tary Public
My commission expires		-

Executed this	day of	, 20
SYRoy LEVELL	***************************************	L.S.
ACKNOWLEDGEM		
State of Massachuset County of Middlesex) s.s.:	
personally appeared through satisfa	ctory evidence	, 20, before me, the undersigned notary publication in the person whose name is signed on the
preceding or attached its stated purpose.	document, and acknowl	edged to me that (he) (she) signed it voluntarily for
	. Nota	ry Public
My commission expir	res	•

C

Executed this day	of	, 20
ST_ Bakary-Barry TOURE	The state of the s	i.S.
Bakary-Barry TOURE		
화생하다. 회사하다		
20년 1월 1 1월 1일 전 1		
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ACKNOWLEDGEMENT		
Ourin of Managaharan	.	
State of Massachusetts) s.s.:	
County of Middlesex) 8.8.:	
County of Mileurosex	,	
On this day of		. 20 before me, the understance notary public
personally appeared	lijkskiljelententeskenset intelljennteskelegenegenegeljen <u>engligeges is us us u</u> s	, 20 before me, the undersigned notary public (name of document signer), proved to me
through satisfactory	evidence	of identification, which were
		, to be the person whose name is signed on the
preceding or attached docu	iment, and acknow	wledged to me that (he) (she) signed it voluntarily for
its stated purpose.		, , , , , , , , , , , , , , , , , , ,
	, No	tary Public
My commission expires		

Executed this day of, 20
BYLS. Fan YANG
ACKNOWLEDGEMENT
State of Massachusetts)) s.s.: County of Middlesex)
On thisday of, 20, before me, the undersigned notary public personally appeared (name of document signer), proved to me through satisfactory evidence of identification, which we
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily fit its stated purpose.
Notary Public
My commission evoires

Executed this day of	
BYThomas CAFERRO	L.S.
ACKNOWLEDGEMENT State of Massachusetts County of Middlesex))s.s.:)
through satisfactory	, 20 , before me, the undersigned notary public,
its stated purpose. My commission expires	, Notary Public

Executed this 3rd day of December, 2012.
Executed this 3rd day of December, 2012. BY Huangshu LEI L.S.
ACKNOWLEDGEMENT
State of) S.s.:
County of)
On thisday of, 20, before me, the undersigned notary public personally appeared (name of document signer), proved to me through satisfactory evidence of identification, which were the undersigned notary public personally appeared, to be the person whose name is signed on the person whose name is signe
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily foits stated purpose.
, Notary Public
My commission expires

Executed thisday of _	, 20
BYFrançois LENOIR	L.S.
ACKNOWLEDGEMENT State of Massachusetts County of Middlesex)) s.s.:)
-	, Notary Public
My commission expires	

्र विकास का day of	TOPO MINING THE STATE OF THE ST	, 20
		L.S.
Englis → LENOIR	The second second second	Aug 100
*CKNOWLEDGEMENT		
State of Massachusetts County of Middlesex)) s.s.;)	
The second of th		, 20_, before me, the undersigned notary public, (name of document signer), proved to me
preceding or attached documents stated purpose.	at, and acknow	to be the person whose name is signed on the ledged to me that (he) (she) signed it voluntarily for
	, Note	ary Public
My commission expires		

- -	day of		, 20
			L.S.
274			
W.C.V.	LEDGEMENT		
Same of M	assachusetts)) s.s.:	
Courty of	Middlesex)	
િર this	day of		, 20, before me, the undersigned notary public,
personally	appeared		, 20, before me, the undersigned notary public, (name of document signer), proved to me of identification, which were
irough	satisfactory	evidence	of identification, which were
preceding this stated p	or attached docum	ent, and acknov	, to be the person whose name is signed on the wledged to me that (he) (she) signed it voluntarily for
-		, No	tary Public
My commi	ssion expires		

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*		L.S.
a Mark G. PALERMO		
CKNOWLEDGEMENT		
Size of Massachusetts)	
A Managaranagasa) s.s.:	
County of Middlesex)	
On this day of		, 20, before me, the undersigned notary p (name of document signer), proved to of identification, which
personally appeared		(name of document signer), proved t
through satisfactory	evidence	to be the person whose name is signed o
receding or attached docum	ent, and acknow	ledged to me that (he) (she) signed it voluntari
is stated purpose.		
	, Not	ary Public
		the terms of the t

##esses this day of	, 20
	L.S.
اعت العالم ا	
KEKNOWLEDGEMENT	
	s.s.:
County of Middlesex)	
Co this day of personally appeared	, 20, before me, the undersigned notary public, (name of document signer), proved to me
Erough satisfactory	evidence of identification, which were to be the person whose name is signed on the
preceding or attached document, is stated purpose.	, and acknowledged to me that (he) (she) signed it voluntarily for
- Committee of the Comm	, Notary Public
fi commiccion avaires	

Executed this day of, 20
EVL.S.
D. SMITH
*CKNOWLEDGEMENT
) s.s.: Chanty of Middlesex
On this day of, 20, before me, the undersigned notary public personally appeared (name of document signer), proved to me
through satisfactory evidence of identification, which were to be the person whose name is signed on the
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for stated purpose.
, Notary Public
the commission expired

	States for Biome					
			L.S.	,		
27.20		A Character				
	Signatory and Po	wer of Autome	f .			
* CKNOWI	EDGEMENT					
Size of Mas County of M)) s.s.:				
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On this	_day of		, 20, be	efore me, the u	ndersigned i	notary pub
personany a errough	sppearedsatisfactory	evidence	of	identification	, whic	ch v
receding of	attached docum	ent, and acknov	vledged to me	e that (he) (sho	e) signed it v	oluntarily
stated pu						

公 证 书

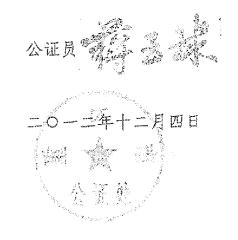
(2012) 渝证字第 43580 号

申请人: HUANGSHU LEI, 男, 一九六三年五月二日出生, 匡籍: 美国, 护照号码: 480174255。

公证事项:签名

兹证明 HUANGSHU LEI 于二〇一二年十二月三日来到我 之, 在我的面前, 在前面的《ASSIGNMENT》上签名。

中华人民共和国重庆市公证处



NOTARIAL CERTIFICATE

(Translation)

(2012) YZ Zi, No.43580

Applicant: HUANGSHU LEI, male, Date of birth: May 2, 1963, Nationality: American, Passport number: 480174255.

Notarial matter: Signature

This is to certify that HUANGSHU LEI came to our notary public office and signed the foregoing ASSIGNMENT on Dec. 3, 2012 before me, the notary public.

Notary: Jiang Yuqiu Chongqing Notary Public Office The People's Republic of China Dec. 4, 2012

公 证 书

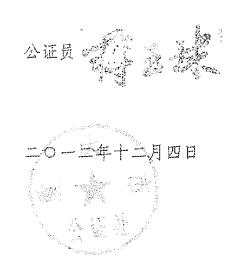
(2012) 渝证字第 43581 号

申请人: HUANGSHU LEI, 男, 一九六三年五月二日出生, 国籍: 美国、护器号码: 480174255。

公证事项: 译本内容与原本内容相符

兹证明前面的(2012)渝证字第 43580 号《公证书》的 英文译本内容与该公证书中文原本相符。

中华人民共和国重庆市公证处



NCTARIAL CERTIFICATE

(Translation)

(2012) YZ Zi, No.43581

Applicant: HUANGSHU LEI, male, Date of birth: May 2, 1963, Nationality: American, Passport number: 480174255.

Notarial matter: the translation is in conformity with the original This is to certify that English copy attached hereto is in conformity with the Chinese copy of Notarial Certificate (2012) YZ Zi, No.43580.

Notary: Jiang Yuqiu Chongqing Notary Public Office The People's Republic of China Dec. 4, 2012

Executed this day of
Novartis Institutes for Biomedical Research Inc.
BY Meta de Madelle L.S. Name: Leader Hartern Authorized Signatory and Power of Attorney
ACKNOWLEDGEMENT
State of Massachusetts)
County of Middlesex) s.s.:
On this trip day of <u>harmonia</u> , 2015, before me, the undersigned notary public, personally appeared <u>harmonia</u> (name of document signer), proved to me through satisfactory evidence of identification, which were the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.
A CORCE AND CORCEASE AND AND Public
My commission expires
SUSAN M. DILLON Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires June 6, 2019



ASSIGNMENT

This Assignment Agreement is entered into by and between

Young Shin CHO	citizen of South Korea / Republic of Korea	Novariis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Julian Ray LEVELL	critzen of United Kingdom	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		US
Baksiy-Bany TOURE	citizen of Canada	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		us
Fan YANG	citizen of China	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenus
		Cambridge, MA 02139
		us
Thomas CAFERRO	citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Huangshu LEI	citizen of United States of America	No.585, Tushan Rd., Nan'an District, Chongqing, P.R.China, 400061
Francois LENOIR	cilizen of Canada	Novartis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA
Gang LIU	cilizen of China	Novertis Institutes for BioMedical Research, Inc.
		250 Massachusetts Avenue
		Cambridge, MA 02139
		USA

citizen of United States of America	Novartis Institutes for BioMedical Research, Inc.
	250 Massachusetts Avenue
	Cambridge, MA 02139
	บร
citizen of United States of America	Novariis Institutes for BioMedical Research, Inc.
	250 Massachusetts Avenue
	Cambridge, MA 02139
	USA
citizen of United States of America	Novartis Institutes for BioMedical
	Research, Inc.
	250 Massachusetts Avenue
	Cambridge, MA 02139
	USA
	America citizen of United States of America citizen of United States of

(hereinafter "Inventor(s)"), and Novartis Institutes for Biomedical Research Inc., 250 Massachusetts Ave, Cambridge, MA 02139, USA, a company organized under the laws of Delaware.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, **Novartis Institutes for Biomedical Research Inc.**, is the true and lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to **Novartis Institutes for Biomedical Research Inc.**, and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

3-PYRIMIDIN-4-YL-OXAZOLIDIN-2-ONES AS INHIBITORS OF MUTANT IDH [Patent Application PAT054800]

and filed in the <u>to be determined</u> Office on <u>to be determined</u>, 20 <u>to be determined</u> and accorded Application Number <u>to be determined</u> and/or filed as a PCT International Application on <u>September 26, 2012</u> and accorded International Patent Application Number

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<u>CT/IB2012/055133</u>; and/or filed in the United States Patent and Trademark Office on <u>September 27, 2011</u> and accorded Application Number <u>61/539553</u>;

- (2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);
- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals;
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be

granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment shall be governed by the laws of Delaware.

This Assignment is effective as from the earliest priority date as stated above.

Executed this day of	
BYYoung Shin CHO	L.S.
ACKNOWLEDGEMENT	
State of Massachusetts)) s.s. County of Middlesex)	
County of Middlesex)	:
personally appeared	, 20, before me, the undersigned notary public, (name of document signer), proved to me
through satisfactory e	vidence of identification, which were, to be the person whose name is signed on the
preceding or attached document, a its stated purpose.	nd acknowledged to me that (he) (she) signed it voluntarily for
	, Notary Public
My commission expires	

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Executed this	.ay of	, 20
BY Julian Roy LEVELL		L.S.
ACKNOWLEDGEME		
State of Massachusetts County of Middlesex)) s.s.:)	
On this day of personally appeared through satisfacts	ory evidence	
preceding or attached dits stated purpose.	ocument, and acknow	ledged to me that (he) (she) signed it voluntarily for
	, Nota	ary Public
My commission expire	ş	

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Executed this day o)[, 20
BY		L.S.
Bakary-Barry TOURE		
ACKNOWLEDGEMENT		
State of Massachusetts)	
County of Middlesex) s.s.:)	
		, 20, before me, the undersigned notary public,
through satisfactory	evidence	(name of document signer), proved to me of identification, which were _, to be the person whose name is signed on the
preceding or attached docur its stated purpose.	nent, and acknov	wledged to me that (he) (she) signed it voluntarily for
**************************************	, No	etary Public
My commission expires		

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Executed this day of, 20
BYL.S. Fan YANG
ACKNOWLEDGEMENT State of Massachusetts) , s.s.; County of Middlesex)
On this day of, 20, before me, the undersigned notary public, personally appeared (name of document signer), proved to me through satisfactory evidence of identification, which were
, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose. , Notary Public
My commission expires

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Executed this day of	, 20
BY Thomas CAFERRO	L.S.
ACKNOWLEDGEMENT	
State of Massachusetts)
County of Middlesex) s.s.:)
On this day of personally appeared	, 20, before me, the undersigned notary public, (name of document signer), proved to me
through satisfactory	evidence of identification, which were to be the person whose name is signed on the
preceding or attached documits stated purpose.	ent, and acknowledged to me that (he) (she) signed it voluntarily for
	, Notary Public
My commission expires	

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Executed this day o	f	, 20
BY Huangshu LEĭ		L.S.
ACKNOWLEDGEMENT		
State of)) s.s.:	
County of)	
On thisday of personally appeared		, 20, before me, the undersigned notary public, (name of document signer), proved to me
through satisfactory	evidence	of identification, which were to be the person whose name is signed on the
preceding or attached documits stated purpose.	nent, and acknov	vledged to me that (he) (she) signed it voluntarily for
	, No	tary Public
My commission expires	***************************************	

Executed this day of	, 20
BYFrancois LENOIR	L.S.
ACKNOWLEDGEMENT State of Massachusetts County of Middlesex)) s.s.:)
through satisfactory	
	, Notary Public
My commission expires	

Executed this day of, 20	
BYL.S. Gang LIU	
ACKNOWLEDGEMENT	
State of Massachusetts)	
State of Massachusetts)) s.s.: County of Middlesex)	
On thisday of, 20, before me, the undersigned notary personally appeared (name of document signer), proved through satisfactory evidence of identification, which, to be the person whose name is signed or	to me were
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntariits stated purpose.	n the ly for
, Notary Public	
My commission expires	

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Executed this day	of	
BY		L.S.
Mark G. PALERMO		
ACKNOWLEDGEMENT		
State of Massachusetts)) s.s.:	
County of Middlesex) 8.8	
On this day of		
personally appeared		(name of document signer), proved to me
through satisfactory	evidence	of identification, which were , to be the person whose name is signed on the
preceding or attached docu its stated purpose.	iment, and acknow	wledged to me that (he) (she) signed it voluntarily for
	, No	etary Public
My commission expires		

Executed this
BY L.S. Michael David SHULTO
ACKNOWLEDGEMENT
State of Massachuseus) State of Massachuseus)
State of Massachusents)
On this 4 th day of December 2012 before me, the understanced parary mublic
On this $\frac{4^{-6}}{4^{-6}}$ day of $\frac{\sqrt{6 + 6 + 6 + 6}}{\sqrt{6 + 6 + 6}}$, 20/2 before me, the undersigned notary public, personally appeared $\frac{\sqrt{6 + 6 + 6 + 6}}{\sqrt{6 + 6 + 6}}$ (name of document signer), proved to me through satisfactory evidence of identification, which were to be the person whose name is signed on the
preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.
My commission expires
Andrew Duff Vice Consulate the American Consulate General Wilet States of American Shanghai China

1.1

executed this day of	, 20
BY Troy D. SMITH	L.S.
ACKNOWLEDGEMENT	
State of Massachusetts)	
County of Middlesex) s.	S.;
On this day of personally appeared	, 20, before me, the undersigned notary public,
through satisfactory	(name of document signer), proved to me evidence of identification, which were to be the person whose name is signed on the
preceding or attached document, its stated purpose.	and acknowledged to me that (he) (she) signed it voluntarily for
	, Notary Public
My commission expires	

Executed this day of	, 2012.
Novartis Institutes for Biomedical Research I	
BY	L.S.
ACKNOWLEDGEMENT State of Massachusetts) County of Middlesex)	
On this day of personally appeared through satisfactory evidence	, 20, before me, the undersigned notary public, (name of document signer), proved to me of identification, which were to be the person whose name is signed on the
preceding or attached document, and acknowle its stated purpose.	edged to me that (he) (she) signed it voluntarily for
, Notar	y Public
My commission expires	

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Executed this	
Novartis Institutes for Biomedical Research Inc.	
BY / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 /	
ACKNOWLEDGEMENT	
State of Massachusetts)) s.s.: County of Middlesex)	
County of Middlesex)	
On this 6th day of <u>December</u> , 2012, before me, the undersigned not personally appeared 1040 [name of document signer), prothrough satisfactory evidence of identification, which heavist to be the person whose name is signer.	ntary public, oved to me were ned on the
, to be the person whose name is signed it voits stated purpose. to be the person whose name is signed it voits stated purpose.	luntarily for
<u> Rotary Public</u> Notary Public	
My commission expires <u>(14/24/9</u>	

