503663078 01/25/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3709712

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHRISTIANE BOEZIO	06/02/2015
ALESSANDRO BOEZIO	06/01/2015
HOWARD BREGMAN	06/01/2015
NAGASREE CHAKKA	06/01/2015
JAMES R. COATS	09/01/2015
KATRINA W. COPELAND	08/28/2015
ERIN F. DIMAURO	06/01/2015
HUA GAO	06/01/2015
DANIEL LA	06/01/2015
ISAAC E. MARX	06/01/2015
HANH NHO NGUYEN	08/28/2015
EMILY PETERSON	06/01/2015
MATTHEW WEISS	06/01/2015
THOMAS DINEEN	12/16/2015

RECEIVING PARTY DATA

Name:	AMGEN INC.
Street Address:	ONE AMGEN CENTER DR.
City:	THOUSAND OAKS
State/Country:	CALIFORNIA
Postal Code:	91320

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14377478

CORRESPONDENCE DATA

Fax Number: (805)499-8011

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.

805-447-7926 Phone:

podgorny@amgen.com Email:

> **PATENT REEL: 037575 FRAME: 0402**

Correspondent Name: AMGEN INC.

Address Line 1: ONE AMGEN CENTER DR.

Address Line 2: PATENT OPERATIONS MS 28-2-C

Address Line 4: THOUSAND OAKS, CALIFORNIA 91320

ATTORNEY DOCKET NUMBER:	A-1692-US-PCT
NAME OF SUBMITTER:	KAREN PODGORNY
SIGNATURE:	/Karen Podgorny/
DATE SIGNED:	01/25/2016

Total Attachments: 18

source=A-1692-US-PCT Assignment#page1.tif

source=A-1692-US-PCT_Assignment#page2.tif

source=A-1692-US-PCT_Assignment#page3.tif

source=A-1692-US-PCT_Assignment#page4.tif

source=A-1692-US-PCT_Assignment#page5.tif

source=A-1692-US-PCT_Assignment#page6.tif

source=A-1692-US-PCT_Assignment#page7.tif

source=A-1692-US-PCT Assignment#page8.tif

source=A-1692-US-PCT_Assignment#page9.tif

source=A-1692-US-PCT_Assignment#page10.tif

source=A-1692-US-PCT_Assignment#page11.tif

source=A-1692-US-PCT_Assignment#page12.tif

 $source = A-1692-US-PCT_Assignment \# page 13.t if$

source=A-1692-US-PCT_Assignment#page14.tif

source=A-1692-US-PCT_Assignment#page15.tif

source=A-1692-US-PCT_Assignment#page16.tif

source=A-1692-US-PCT_Assignment#page17.tif

source=A-1692-US-PCT_Assignment#page18.tif

PATENT REEL: 037575 FRAME: 0403

ASSIGNMENT

Whereas, I/we,	Christiane BOEZIO, 54 Myrtle Street, #1, Somerville, MA 02145 US
	Alessandro BOEZIO, 54 Myrtle Street, #1, Somerville, MA 02145 US
***************************************	Howard BREGMAN 12 Howard Street, Melrose, MA 02176 US
	Nagasree CHAKKA, 16 Wellington Avenue, Lexington, MA 02421 US
	James R. COATS, 1027 SW Leschi Drive, Oak Harbor, WA 98277 US
	Katrina W. COPELAND, 845 West Falmouth Hwy, Falmouth, MA, 02540 US
	Erin F. DIMAURO, 250 Chestnut Street, Cambridge, MA 02139 US
	Thomas DINEEN, 36 Waterhouse Street, Somerville, MA 02144 US
	Hua GAO, 11 Heather Lane, Canton, MA 02021 US
	Daniel LA, 124 Park Street, #3, Brookline, MA 02446 US
	Isaac E. MARX, 7 Michael Street, Arlington, MA 02474 US
	Hanh Nho NGUYEN, 293 Moccasin Trail West, Jupiter, FL 33458 US
	Emily PETERSON, 60 Fairfield Street, Apt. 3, Cambridge, MA 02140 US
	Matthew WEISS, 99 Revere Street, Boston, MA 02114 US

(hereinafter referred to as ASSIGNOR), have made an invention which is the subject of an application for Letters Patent of the United States; and/or is the subject of a provisional application; and/or is the subject of an international application; and/or is the subject of other patent application(s) in other jurisdictions worldwide ("Application") entitled

Dihydrobenzoxazine And Tetrahydroquinoxaline Sodium Channel Inhibitors

which is found in:

US Application Serial No. <u>14/377,478</u> filed <u>February 12, 2013</u>; which claims the benefit of U.S. Provisional Application No. <u>61/598,136</u> filed <u>February 13, 2012</u>.

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799 wishes to acquire the entire right, title, and interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby sells, assigns, transfers and sets over unto AMGEN INC., its successors and assigns (collectively "ASSIGNEE") ASSIGNOR'S entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom,

all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, continuation-in-part, substitute, reissue, and/or reexamination applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by ASSIGNEE for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, and any extensions thereof, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment and sale not been made.

Further, ASSIGNOR hereby sells, assigns, transfers, and sets over unto ASSIGNEE ASSIGNOR'S entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by ASSIGNOR or at ASSIGNOR'S direction or deposited on ASSIGNOR'S behalf by ASSIGNEE, its affiliates, employees, or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, ASSIGNOR'S unreserved and irrevocable consent and authorization to ASSIGNEE to refer to the deposited microorganism(s) or other biological material(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any foreign Patent Office authority to issue any such Letters Patent which may be granted on the Application to ASSIGNEE as assignee of the entire right, title and interest therein and thereto.

For ASSIGNOR and for ASSIGNOR'S legal representatives, ASSIGNOR covenants and agrees with ASSIGNEE that ASSIGNOR has not granted to any others any license to make, use or sell any of such inventions, that ASSIGNOR'S right, title and interest in such inventions has not been encumbered, that ASSIGNOR has good right and title to sell and assign the same, and that ASSIGNOR will not execute any instrument in conflict herewith.

For ASSIGNOR and for ASSIGNOR'S heirs, successors and legal representatives, ASSIGNOR further covenants and agrees with ASSIGNEE that upon request ASSIGNOR and ASSIGNOR'S heirs, successors and legal representatives will: (i) execute continuing, divisional, substitute, reexamination, and/or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to ASSIGNEE any facts known to ASSIGNOR or ASSIGNOR'S heirs, successors and legal representatives relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for ASSIGNEE, may be necessary or desirable to secure the grant of Letters Patent to ASSIGNEE or its nominees, in the United States and in all other countries where ASSIGNEE may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for ASSIGNEE and to vest and confirm in ASSIGNEE or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid at the expense of ASSIGNEE.

COMMONWEALTH OF MASSACHUSETTS

In Witness Whereof I have executed the	his assignment on		20 /5
		(Month, Day)	(Year)
		$\Delta M \Delta a$	A STATE OF THE STA
Christianie Boezio		-	
(Name of Inventor)		(Signature of Invent	or)
COMMONW	TALTH OF MASS	SACHUSETTS	
County of MANAGES 5	SS.		
On this the day of	June Month		before me,
Laurie A. M. Name of Notary F		, the undersigned Not	ary Public,
personally appeared	hrstan Ba	2710	
	Name(s) of S	igner(s)	
proved to me through satisfactory evid	dence of identity, wh	nich was/were	
MA DAWGAS AU Description of Ex	vidence of Identity	to be th	e person(s)
whose name(s) is/are signed on the pr	receding or attached	document, and acknowle	dged to me
that he/she/they signed it voluntarily f	or its stated purpose		
		Au Lature of Notary Public	<u></u>
LAURIE A. MCSHOOF Many Press:		<i>IND H MCBell</i> I Name of Notary Public	<u> </u>
	My Commission I	Expires: June 5	2020

COMMONWEALTH OF MASSACHUSETTS

In Witness Whereof I have executed this assignment on	JUNO 1, 29/5
	(Monthe Day) (Year)
Alesanaro Boezro	//(/4
(Name of Inventor)	(Signature of Inventor)
	, pierre
COMMONWEALTH OF MAS	SSACHUSETTS
County of <i>Millial</i> SS.	
On this the day of	. ZUE, before me,
AGUNIO A MOBRICIO Name of Notary Public	, the undersigned Notary Public,
personally appeared Alexandre	<u>;</u>
Name(s) of	Signer(s)
proved to me through satisfactory evidence of identity, v	vhich was/were
MA armeis heerse	, to be the person(s)
Description of Evidence of Identity	
whose name(s) is/are signed on the preceding or attache	d document, and acknowledged to me
that he/she/they signed it voluntarily for its stated purpos	se.
	Ur allebudi
Sig	mature of Notary Public
LAURIS A. MCSPROSE MCS May Public Mess rechoseds Commission Express Jun 5, 2020 Print	ed Name of Notary Public
My Commission	Expires: Tune 5 2020

In Witness Whereof I have executed this assignment on	JUNO 1	20/
	(Month, Day)	(Year)
Howard Breenan	ngly	
(Name of Inventor)	(Signature of Invent	or)
COMMONWEALTH OF MASS	ACHUSETTS	
County of <i>Madesex</i> ss.		
On this the	. 70/5 ,	before me,
LAUTIP A. MCBride Name of Notary Public	, the undersigned Not	ary Public,
personally appeared ////////////////////////////////////	gner(s)	
proved to me through satisfactory evidence of identity, whi	ich was/were	
MA ANURE LUNGE Description of Evidence of Identity	to be the	ie person(s)
whose name(s) is/are signed on the preceding or attached	document, and acknowle	dged to me
that he/she/they signed it voluntarily for its stated purpose.	a.	*
<u> </u>	aillulou	12
Notice Public Manuscriptor Scott 1, 1920 Little L	ature of Notary Public Old Mane of Notary Public	, \
My Commission E	f mmm	2027

In Witness Whereof I have executed	this assignment on	June /	20/5
		(Month, Day)	(Year)
Nagasree Clakka (Name of Inventor)		PART	
(Name of Inventor)		(Signature of Invent	or)
COMMONV	VEALTH OF MASS.	ACHUSETTS	
County of MIAALESE	88.		
On this the day of	VIII Month		before me,
Adurio A. M. Name of Notary	***************************************	, the undersigned Nota	ary Public,
personally appeared	<i>DEL CLAKKA</i> Name(s) of Sig	(ner(s)	······································
proved to me through satisfactory evi	dence of identity, whi	ch was/were	
144 Arwest Lale Description of B	249C ividence of Identity	, to be th	e person(s)
whose name(s) is/are signed on the p	receding or attached of	locument, and acknowle	dged to me
that he/she/they signed it voluntarily	for its stated purpose.		
	124	Malond	je Kete
LAURIS A. MCBRISH Section Public Section States Section Commission Explication 5, 2029	Laure	nture of Notary Public A. A. Brace Name of Notary Public	
	My Commission E	xpires: <i>\\\ \(\sqrt{U40} \) \(\) \(\)</i>	2020_

STATE OF WASHINGTON

Place Notary Seal and/or Stamp Above

In Witness Whereof I have executed this assi	gnment on September 2015. (Month, Day) (Year)
James R. COATS (Name of Inventor)	(Signature of Inventor)
UNITED STA	ATES OF AMERICA
State of Washington County of NOVOVAL State of Washington State of Washington	
I certify that I know or have satisfactory evid	dence that Name of Signer
	is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in the instrument.
	Dated: ON 1006 Month/Day/Year
	A Signarure of Notarizing Officer
ROXANNE J. HOLMES NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES FEBRUARY 28, 2018	HALLY JOHN SING OLD HALL
FEBRUARY 28, 2018	My appointment expires:
Place Notary Scal and/or Stamp Above	Month/Day/Year of Appointment Expiration

In Witness Whereof I have executed this assignment on	1 August 20 15 (Month, Day) 20 15 (Year)
Katrina W. COPELAND (Name of Inventor)	(Signature of Inventor)
COMMONWEALTH OF MA	SSACHUSETTS
County of <u>Bunstrible</u> ss.	
On this the ASAN day of AUGUSY Day Month MARTIEL Name of Notary Public	
personally appeared TAHINA W. Wf	PEJANCI of Signer(s)
proved to me through satisfactory evidence of identity,	which was/were
MNDL 572861985 Description of Evidence of Identity	to be the person(s)
whose name(s) is/are signed on the preceding or attach	ed document, and acknowledged to me
Trayent	ignature of Notary Public ANCHEL nted Name of Notary Public



COMMONWEALTH OF MASSACHUSETTS

In Witness Whereof I have executed this assignment on	VUNC / 20 15
grant.	(Month, Day) (Year)
Ern DiMauro	
(Name of Inventor)	(Signature of Inventor)
COMMONWEALTH OF MASSA	ACHUSETTS
County of <i>Malisex</i> ss.	
On this the day of	Year before me,
Name of Notary Public	, the undersigned Notary Public,
personally appeared <u>Erin DiMauro</u>	
Name(s) of Sign	ner(s)
proved to me through satisfactory evidence of identity, which	ch was/were
Description of Evidence of Identity	to be the person(s)
whose name(s) is/are signed on the preceding or attached d	ocument, and acknowledged to me
that he/she/they signed it voluntarily for its stated purpose.	
LAURIE A MCBROSE AMBRY PORCE A CONTROL OF THE CON	ture of Notary Public
	Name of Notary Public

In Witness Whereof I have executed this assignment on _	JUNE / 20/5
~	(Month, Dax) (Year)
	OLI Via
Hua Gao	Mayno
(Name of Inventor)	(Signature of Inventor)
COMMONWEALTH OF MAS	SACHUSETTS
County of M/dalesee ss.	
On this the day of	, ZUS before me,
	, the undersigned Notary Public,
Name of Notary Public	
personally appeared Hua Gao	
Name(s) of S	Signer(#)
proved to me through satisfactory evidence of identity, w	hich was/were
MA dowers livere	, to be the person(s)
Description of Evidence of Identity	
whose name(s) is/are signed on the preceding or attached	document, and acknowledged to me
that he/she/they signed it voluntarily for its stated purpose	<u>.</u>
Sign	nature of Notary Public
D state of the sta	MICA MGENTAL d Name of Notary Public
My Commission	Expires: <u>\\U& 5, 2020</u>

In Witness Whereof I have executed th	nis assignment on	Sure !	20 /5 .
		(Month, Day)	(Year)
			A M
Daniel La		C) Lucy of	
(Name of Inventor)		(Signature of Inven	tor)
COMMONW	EALTH OF MASS	ACHUSETTS	
County of <i>MIGALOSC</i> s	s.		
On this the day of			before me,
Laure A Mo Name of Notary P	<i>Gride</i>	, the undersigned Not	ary Public,
personally appeared <u>Parie</u>	/// Name(s) of Si	finet(2)	
proved to me through satisfactory evic	lence of identity, wh	ich was/were	
provide to the analysis of the	*		
MA demos la	CCC ridence of Identity	, to be ti	ne person(s)
whose name(s) is/are signed on the pr	receding or attached		edged to me
	1.00	. 12 6. 12.	y maren
	Sign	ature of Notary Public	
LAURIE A. WARRIE Briday Politic Universitation Explores Jun. 5, 2020	604	A MOBIL Name of Notary Public	
	My Commission E	expires: <i>Juno 5, 2</i>	2020

In Witness Whereof I have executed this assignment on	Vune 1	20 /5
	(Mgnth, Day)	(Year)
Isac Marx		
(Name of Inventor)	(Signature of Invent	or)
COMMONWEALTH OF MASSA	ACHUSETTS	
County of Midalices ss.		
On this the /S day of // Month		before me,
Name of Notary Public	, the undersigned Nota	ary Public,
personally appeared ZQUC F Mame(s) of Sign	ier(s)	
proved to me through satisfactory evidence of identity, which	ch was/were	
MA drubes Illes Description of Evidence of Identity	, to be th	e person(s)
whose name(s) is/are signed on the preceding or attached d	ocument, and acknowle	dged to me
that he/she/they signed it voluntarily for its stated purpose.		
States y Problem Measure thoughts Commission Explore Jun 5, 2020	ture of Notary Public	
My Commission Ex	Name of Notary Public	<i>2020</i>

STATE OF FLORIDA

In Witness Whomas El have a grant of the	3 A 3.8
In Witness Whereof I have executed this ass	signment on <u>The 40T 28</u> 2015. (Month, Day) (Year)
Hanh Nho NGUYEN	
(Name of Inventor)	(Signature of Inventor)
UNITED STA	ATES OF AMERICA
State of Florida County of Pilm Bend ss.	
I certify that I know or have satisfactory evi	dence that Hank Mks MgUYEs Name of Signer
mannamanahammanamanahammak	is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in the instrument. Dated:
F. AVER, 8 Notary Public, State of Florids Commission & FF 12383 Notary Public, State of Florids Sty comm. expires Apr. 28, 2017	Month/Day/Year Signature of Notarizing Officer And Poblic Title
Place Notary Seal and/or Stamp Above	My appointment expires: April 25/20/7 Month/Day/Year of Appointment Expiration

In Witness Whereof I have executed t	his assignment on	JULL 1	20 /5
		(Month, Day)	(Year)
(Name of Inventor)			
(Name of Inventor)	9	(Signature of Inven	tor)
COMMONW	EALTH OF MASSA	CHUSETTS	
County of MIAALSES .	38.		
On this the day of	June Month		, before me,
LQUATE A. M Name of Notary I		, the undersigned No	tary Public,
personally appeared	7 Pitisan Name(s) of Sigr	ner(s)	
proved to me through satisfactory evi-	dence of identity, which	th was/were	
NA ANICAS Description of E	LUISE vidence of Identity	, to be t	he person(s)
whose name(s) is/are signed on the p	receding or attached d	ocument, and acknowl	edged to me
that he/she/they signed it voluntarily i	for its stated purpose.		
LAURIE A. BICSROSE Solary Politic Messachination Commission Expires Jun 5, 2020	Laune	ture of Notary Public A. M. S.	
	My Commission Ex	spires: <u>\\\\\</u>	2020

COMMONWEALTH OF MASSACHUSETTS

In Witness Whereof I have executed this assignment on	June 1 20/5
	(Month, Day) (Year)
Mathew Weiss	
(Name of Inventor)	(Signature of Inventor)
COMMONWEALTH OF MAS	SACHUSETTS
County of <u>Midalases</u> ss.	
On this the day of Month	, <u>AO/S</u> , before me,
Laure A. McBride	, the undersigned Notary Public,
Name of Notary Public	
personally appeared Mathew News	
Name(s) of S	äigner(s)
proved to me through satisfactory evidence of identity, where the satisfactory evidence is the satisfactory evidence of identity, where the satisfactory evidence is the satisfactory evidence of identity, where the satisfactory evidence is the satisfactory evidence of identity, where the satisfactory evidence is the satisfactory eviden	hich was/were
Description of Evidence of Identity	, to be the person(s)
whose name(s) is/are signed on the preceding or attached	document, and acknowledged to me
that he/she/they signed it voluntarily for its stated purpose	>.
Noting Police House Automatic House Police House Automatic	nature of Notary Public Notary Public Notary Public
	Expires: Value 5 2000

ASSIGNMENT

Whereas, I/we,	, Christiane BOEZIO, 54 Myrtle Street, #1, Somerville, MA 02145 US		
	Alessandro BOEZIO, 54 Myrtle Street, #1, Somerville, MA 02145 US		
	Howard BREGMAN 12 Howard Street, Melrose, MA 02176 US		
	Nagasree CHAKKA, 16 Wellington Avenue, Lexington, MA 02421 US		
	James R. COATS, 1027 SW Leschi Drive, Oak Harbor, WA 98277 US		
	Katrina W. COPELAND, 845 West Falmouth Hwy, Falmouth, MA, 02540 US		
	Erin F. DIMAURO, 250 Chestnut Street, Cambridge, MA 02139 US		
	Thomas DINEEN, 36 Waterhouse Street, Somerville, MA 02144 US		
	Hua GAO, 11 Heather Lane, Canton, MA 02021 US		
	Daniel LA, 124 Park Street, #3, Brookline, MA 02446 US		
	Isaac E. MARX, 7 Michael Street, Arlington, MA 02474 US		
	Hanh Nho NGUYEN, 185 Brattle Street, Arlington, MA, 02474 US		
	Emily PETERSON, 60 Fairfield Street, Apt. 3, Cambridge, MA 02140 US		
	Matthew WEISS, 99 Revere Street, Boston, MA 02114 US		

(hereinafter referred to as ASSIGNOR), have made an invention which is the subject of an application for Letters Patent of the United States; and/or is the subject of a provisional application; and/or is the subject of an international application; and/or is the subject of other patent application(s) in other jurisdictions worldwide ("Application") entitled

Dihydrobenzoxazine And Tetrahydroquinoxaline Sodium Channel Inhibitors

which is found in:

US Application Serial No. <u>14/377,478</u> filed <u>February 12, 2013</u>; which claims the benefit of U.S. Provisional Application No. 61/598,136 filed February 13, 2012.

Whereas AMGEN INC., a Delaware corporation having its principal place of business at One Amgen Center Drive, Thousand Oaks, California 91320-1799 wishes to acquire the entire right, title, and interest in all inventions disclosed in such Application;

Now, therefore, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby sells, assigns, transfers and sets over unto AMGEN INC., its successors and assigns (collectively "ASSIGNEE") ASSIGNOR'S entire right, title and interest in, to and under the Application, and any provisional application(s) from which Application is derived, and all priority rights to which the Application may be entitled, including all priority rights for other countries arising therefrom,

all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries which may be granted for such inventions, or any of them, including divisional, continuation, continuation-in-part, substitute, reissue, and/or reexamination applications based on the above identified Application, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by ASSIGNEE for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, and any extensions thereof, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment and sale not been made.

Further, ASSIGNOR hereby sells, assigns, transfers, and sets over unto ASSIGNEE ASSIGNOR'S entire right, title and interest in or to the right to refer to, to access, and to control microorganism(s) or other biological material(s) related to the Application and which are deposited by ASSIGNOR or at ASSIGNOR'S direction or deposited on ASSIGNOR'S behalf by ASSIGNEE, its affiliates, employees, or employees of its affiliates. The transfer of such right, title and interest includes, without limitation, ASSIGNOR'S unreserved and irrevocable consent and authorization to ASSIGNEE to refer to the deposited microorganism(s) or other biological material(s) in the Application and the right to make available to the public the deposited material in accordance with the laws, treaties, statutes, rules, regulations and the like of the United States, all other countries, and any patent granting authority or organization.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any foreign Patent Office authority to issue any such Letters Patent which may be granted on the Application to ASSIGNEE as assignee of the entire right, title and interest therein and thereto.

For ASSIGNOR and for ASSIGNOR'S legal representatives, ASSIGNOR covenants and agrees with ASSIGNEE that ASSIGNOR has not granted to any others any license to make, use or sell any of such inventions, that ASSIGNOR'S right, title and interest in such inventions has not been encumbered, that ASSIGNOR has good right and title to sell and assign the same, and that ASSIGNOR will not execute any instrument in conflict herewith.

For ASSIGNOR and for ASSIGNOR'S heirs, successors and legal representatives, ASSIGNOR further covenants and agrees with ASSIGNEE that upon request ASSIGNOR and ASSIGNOR'S heirs, successors and legal representatives will: (i) execute continuing, divisional, substitute, reexamination, and/or reissue applications, amended specifications, or rightful declarations or oaths; (ii) communicate to ASSIGNEE any facts known to ASSIGNOR or ASSIGNOR'S heirs, successors and legal representatives relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings or litigation; (iv) execute and deliver any application papers, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for ASSIGNEE, may be necessary or desirable to secure the grant of Letters Patent to ASSIGNEE or its nominees, in the United States and in all other countries where ASSIGNEE may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for ASSIGNEE and to vest and confirm in ASSIGNEE or its nominees the full and complete legal and equitable title to all such Letters Patent, without further consideration than that now paid at the expense of ASSIGNEE.

COMMONWEALTH OF MASSACHUSETTS

In Witness Whereof I have executed this assignment on	, December 16th	20 6 .
	(Month, Day)	(Year)
Thomas DINEEN	9114	
(Name of Inventor)	(Signature of Inven	tor)
COMMONWEALTH OF MA	SSACHUSETTS	
County of Middle Sex ss.		
On this the 16 day of 10 Comber	, <u>2015</u> , Year	, before me,
personally appeared Komas A Div		ary Public,
proved to me through satisfactory evidence of identity,	of Signer(s) which was/were	
MA Divers Lieure Description of Evidence of Identity		ne person(s)
whose name(s) is/are signed on the preceding or attach	ed document, and acknowle	edged to me
that he/she/they signed it voluntarily for its stated purpo	ose.	
Ana	ignature of Notary Public Stasie 10 Ka	
Prin My Commissio	nted Name of Notary Public on Expires: <u>/ Lace </u>	24,2006
	No Commonwe	ASIE DUFFAUT lary Public aid of Maxachusums
·	200 CONTRACTOR	n Expens Jame 24, 2022

PATENT REEL: 037575 FRAME: 0421