PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3419437

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEPHEN J. BLAKEMORE	10/04/2014
BIN LI	09/29/2014
GEORGE J. MULLIGAN	10/02/2014
MATTHEW C. SCHU	10/13/2014
PETER G. SMITH	10/07/2014

RECEIVING PARTY DATA

Name:	MILLENNIUM PHARMACEUTICALS, INC.
Street Address:	40 LANDSDOWNE STREET
City:	CAMBRIDGE
State/Country:	MASSACHUSETTS
Postal Code:	02139

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14354149

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.

Phone: 617 679 7000

Email: ann.sherry@takeda.com, ann.sherry@mpi.com,

ipdocketing@takeda.com

Correspondent Name: MILLENNIUM PHARMACEUTICALS, INC.

Address Line 1: 40 LANDSDOWNE STREET

Address Line 4: CAMBRIDGE, MASSACHUSETTS 02139

ATTORNEY DOCKET NUMBER:	MPI11-009P1RNUS1M
NAME OF SUBMITTER:	TRACY M. SIOUSSAT
SIGNATURE:	/Tracy M. Sioussat/
DATE SIGNED:	06/30/2015

Total Attachments: 28

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PATENT

For: U.S. and Foreign Rights

For: U.S. Application

By: Inventors

ASSIGNMENT OF INVENTION

WHEREAS,

ASSIGNORS:
Stephen J. Blakemore
16 Ernies Drive, Littleton, Massachusetts 01460
Nationality: <u>United Kingdom</u>
Bin Li
65 Baker Street, Belmont, Massachusetts 02478
Nationality: <u>United States</u>
George J. Mulligan
32 Taft Avenue, Lexington, Massachusetts 02421
Nationality: United States
Matthew C. Schu
21.5 Quincy Street, Somerville, Massachusetts 02143
Nationality: <u>United States</u>
Peter G. Smith
173A Franklin Street, Arlington, Massachusetts 02474
Nationality: United Kingdom

have co-invented a certain invention entitled:

BIOMARKERS OF RESPONSE TO NAE INHIBITORS

for which they have executed an application for a United States patent, which was filed on April 25, 2014, under U.S. Application No. 14/354,149; and

WHEREAS,

ASSIGNEE:

MILLENNIUM PHARMACEUTICALS, INC. 40 Landsdowne Street Cambridge, Massachusetts 02139 State of Incorporation: Delaware

is desirous of acquiring ASSIGNORS' entire domestic and foreign right, title, and interest in and under the invention described in the patent application;

Now, Therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNORS hereby, without reservations, sell, assign and transfer to ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and to the invention in the United States and in every foreign country, and our entire right, title, and interest in and to the patent application and such other applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, National phase applications, including petty patent applications and utility model applications) as may be filed on the invention in the United States or in any foreign country, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon; said invention, applications, and patents to be held and enjoyed by ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made.

ASSIGNORS hereby authorize the ASSIGNEE to insert in this assignment document the filing date and application number of the application if the date and number are unavailable at the time this document is executed.

ASSIGNORS hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein. ASSIGNORS further acknowledge that this assignment carries with it the right in ASSIGNEE to claim under the Patent Cooperation Treaty, the International Convention and/or other international arrangement for any such application the date of the United States application (or any other application on the invention) to gain priority with respect to other applications.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNORS further covenant that we will at any time upon request, without further or additional consideration, but at the expense of the ASSIGNEE, execute and deliver such additional assignments and other writings and do such additional acts as the ASSIGNEE may deem necessary or desirable to perfect the ASSIGNEE's enjoyment of this assignment, and render

(Page 2 of 7)

all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, reissued, reexamined, and National phase patents of the United States or of any and all foreign countries on the invention, and in enforcing any rights or choses in action accruing as a result of such applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representative of all parties hereto.

AND, ASSIGNORS do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

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IN WITNESS WHEREOF, I have hereunto set my hand thisday of
October, 2014.
Palacenore
Signature of Inventor Stephen J. Blakemore
Superallemon
Witness 1 Signature
Mark D heard
Witness 1 (Typed or Handwritten) Name
Witness 1 (Typed or Handwritten) Name 150 Whitcomb Ave Littleton, MA 01460
Witness 1 Address
Virginia Company of the company of t
Witness 2 Signature
Virginia B Leonard
Witness 2 (Typed or Handwritten) Name
150 Whitcomb Ave Littleton, MA 01460
Witness 2 Address

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IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.		day of		
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Signature of Inventor Bin Li				
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IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.		day of		
Signature of Inventor Peter G. Smith				
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Witness 2 Address				

(Page 7 of 7)

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16 Ernies Drive, Littleton, Massachusetts 01460
Nationality: <u>United Kingdom</u>
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65 Baker Street, Belmont, Massachusetts 02478
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Matthew C. Schu
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Peter G. Smith
173A Franklin Street, Arlington, Massachusetts 02474
Nationality: United Kingdom

have co-invented a certain invention entitled:

BIOMARKERS OF RESPONSE TO NAE INHIBITORS

for which they have executed an application for a United States patent, which was filed on April 25, 2014, under U.S. Application No. 14/354,149; and

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IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.	day of	
Signature of Inventor Stephen J. Blakemore	<u>-</u>	
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Witness 1 Address		
Witness 2 Signature		
Witness 2 (Typed or Handwritten) Name		
Witness 2 Address		

(Page 3 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this 29th day of <u>September</u> , 2014.
BN.
Signature of Inventor Bin Li
Man & Mary
Watness 1 Signature
ANDREW S KRUEGER
Witness 1 (Typed or Handwritten) Name
200 Woodriew Way, unit 210, Natertown, MA 02472
Witness 1 Address Address
Witness 2 Signature
Hyunjin Shuh
Witness 2 (Typed or Handwritten) Name
44 Washington ST #1114, Brookline, MA 02445 Witness 2 Address

(Page 4 of 7)

An a
IN WITNESS WHEREOF, I have hereunto set my hand this day of
October, 2014.
MM
Signature of Inventor George J. Mulligan
and Berry
Witness 1 Signature
Witness 1 (Typed or Handwritten) Name
35 Lands downe St. Cambridge, MA
Witness 1 Address
Witness 2 Signature
Witness 2 (Typed or Handwritten) Name
Witness 2 Address Witness 2 Address

(Page 5 of 7)

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Signature of Inventor	Matthew C. Schu			
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(Page 6 of 7)

IN WITNESS WHEREOF, I have hereunto set my l, 2014.	hand this day of	
Signature of Inventor Peter G. Smith		
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Witness 2 Address		

(Page 7 of 7)

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IN WITNESS WHEREOF, I have hereunto set my hand this day of, 2014.	
Signature of Inventor Stephen J. Blakemore	
Witness 1 Signature	1
Witness 1 (Typed or Handwritten) Name	-
Witness 1 Address	-
Witness 2 Signature	_
Witness 2 (Typed or Handwritten) Name	_
Witness 2 Address	_

(Page 3 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.	day of	
Signature of Inventor Bin Li		
Witness 1 Signature		
Witness 1 (Typed or Handwritten) Name	·	
Witness 1 Address		
Witness 2 Signature		
Witness 2 (Typed or Handwritten) Name		
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(Page 4 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.	day of	
Signature of Inventor George J. Mulligan		
Witness 1 Signature		
Witness 1 (Typed or Handwritten) Name		
Witness 1 Address		
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(Page 5 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this day of, 2014.
Mart Clh
Signature of Inventor Matthew C. Schu
ZM
Witness 1 Signature
_ Eric J Earley
Witness 1 (Typed or Handwritten) Name
4324 S. Alston Ave. Durham, NC 27713
Witness 1 Address
Mid C Brown
Witness 2 Signature
Chad C Brown
Witness 2 (Typed or Handwritten) Name
3311 Bonaparte Way Parhom, NC 27707 Witness 2 Address

(Page 6 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this, 2014.	day of	
Signature of Inventor Peter G. Smith		
Witness 1 Signature		
Witness 1 (Typed or Handwritten) Name		
Witness 1 Address		
Witness 2 Signature		
Witness 2 (Typed or Handwritten) Name		
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(Page 7 of 7)

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ASSIGNMENT OF INVENTION

WHEREAS,

Stephen J. Blakemore
16 Ernies Drive, Littleton, Massachusetts 01460
Nationality: <u>United Kingdom</u>
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, 2014.			
Signature of Inventor Stephen J. Blakemore			
Witness 1 Signature			
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Witness 1 (Typed or Handwritten) Name			
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Witness 2 Signature	 		
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(Page 3 of 7)

IN WITNESS WHEREOF, I have hereunto set my hand this	day of
, 2014.	
Signature of Inventor Bin Li	
Witness 1 Signature	
Witness 1 (Typed or Handwritten) Name	
Witness 1 Address	
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(Page 4 of 7)

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Signature of Inventor Cooper I Mullimer)
Signature of Inventor George J. Mulligan		
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(Page 5 of 7)

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Signature of Inventor Matthew C. Schu		
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Witness 1 Signature		
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Witness 2 Address		

(Page 6 of 7)

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Signature of Inventor Peter G. Smith
Witness L. Signature
DOMINIC REYNOLOS
Witness 1 (Typed or Handwritten) Name
29 BONAD ROAD, STONEHAM, MA OZIBO
Witness 1 Address
S. D.
Witness 2 Signature
ANAND SELVARAJ
Witness 2 (Typed or Handwritten) Name
4 CRAWFORD ST APT 10, CAMBRIDGE, MA 012139

(Page 7 of 7)