

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4959266

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THOMAS H. GRAHAM	10/07/2016
TAO YU	10/09/2016
ANDREW STAMFORD	10/13/2016
WENSHENG LIU	10/13/2016
LIBO XU	10/18/2016
SHERMAN T. WADDELL	10/17/2016
JOHN A. MCCAULEY	10/10/2016
JAY A. GROBLER	10/10/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MERCK SHARP & DOHME CORP.
<b>Street Address:</b>	126 EAST LINCOLN AVENUE
<b>Internal Address:</b>	RY86-2011A
<b>City:</b>	RAHWAY
<b>State/Country:</b>	NEW JERSEY
<b>Postal Code:</b>	07065
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15775871
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(732)594-4720
<i>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.</i>	
<b>Phone:</b>	732-594-4488
<b>Email:</b>	us_efs@merck.com
<b>Correspondent Name:</b>	MERCK
<b>Address Line 1:</b>	P O BOX 2000
<b>Address Line 4:</b>	RAHWAY, NEW JERSEY 07065-0907
<b>ATTORNEY DOCKET NUMBER:</b>	24173-US-PCT
<b>NAME OF SUBMITTER:</b>	MICHELLE A. SISCO

<b>SIGNATURE:</b>	/Michelle A. Sisko/
<b>DATE SIGNED:</b>	05/14/2018
<b>Total Attachments: 7</b> source=24173-ASSIGN#page1.tif source=24173-ASSIGN#page2.tif source=24173-ASSIGN#page3.tif source=24173-ASSIGN#page4.tif source=24173-ASSIGN#page5.tif source=24173-ASSIGN#page6.tif source=24173-ASSIGN#page7.tif	

**WORLDWIDE ASSIGNMENT**

WHEREAS, I/WE,

- |                         |                                                     |
|-------------------------|-----------------------------------------------------|
| (1) Thomas H. Graham,   | located at Scotch Plains, New Jersey 07076, USA,    |
| (2) Tao Yu,             | located at Edison, New Jersey 08820, USA,           |
| (3) Sherman T. Waddell, | located at Westfield, New Jersey 07090, USA,        |
| (4) John A. McCauley,   | located at Maple Glen, Pennsylvania 19002, USA,     |
| (5) Andrew Stamford,    | located at Chatham Township, New Jersey, 07928, USA |
| (6) Wensheng Liu,       | located at Edison, New Jersey 08820, USA            |
| (7) Jay A. Grobler,     | located at Gwynedd, Pennsylvania 19436, USA and     |
| (8) Libo Xu,            | located at Bridgewater, New Jersey 08807, USA       |

(hereinafter ASSIGNOR(S)), is/are the inventor(s) of the invention described in an application for Patents having the Attorney Docket Number indicated above and the following Title of the Invention:

**SPIROCYCLIC PYRIDOTRIAZINE DERIVATIVES USEFUL AS HIV INTEGRASE INHIBITORS**

and/or in the following application(s):

U.S. Provisional Application No. 62/256,410 filed on November 17, 2015;

U.S. Application No. \_\_\_\_\_ having a filing date of \_\_\_\_\_; and

PCT International Application No. \_\_\_\_\_ having a filing date of \_\_\_\_\_.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this 07 day of October, 2016

Thomas H. Graham

Thomas H. Graham

# ACKNOWLEDGEMENT

STATE of NEW JERSEY )  
County of Union ) s.s.:

On this 07 day of October, 2016, personally appeared before me **Thomas H. Graham**, to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanelledis  
Notary Public

Executed this 07 day of October, 2016

Tao Yu

# ACKNOWLEDGEMENT

STATE of NEW JERSEY )  
County of Union ) s.s.:

On this 07 day of October, 2016, personally appeared before me **Tao Yu**, to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanelledis  
Notary Public

CHRISTINE M. KANELLEDIS  
Notary Public of New Jersey  
I.D. # 2442  
Commission Expires January 9, 2019

Executed this 13<sup>TH</sup> day of OCTOBER, 2016.

Andrew Stamford

Andrew Stamford

# ACKNOWLEDGEMENT

STATE of NEW JERSEY )  
County of Union ) s.s.:

On this 13 day of October, 2016, personally appeared before me **Andrew Stamford**, to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanelledis  
Notary Public

CHRISTINE M. KANELLEDIS  
Notary Public of New Jersey  
I.D. # 2442  
Commission Expires January 9, 2019

Executed this 13 day of Oct., 2016.Wensheng Liu  
Wensheng Liu

## ACKNOWLEDGEMENT

STATE of NEW JERSEY )  
County of Union ) s.s.:On this 13 day of October, 2016, personally appeared before me **Wensheng Liu**, to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanellidis  
Notary PublicExecuted this 18<sup>th</sup> day of October, 2016.Libo Xu  
Libo XuCHRISTINE M. KANEL  
Notary Public of New J  
I.D. # 2442057  
Commission Expires January 9, 2019

## ACKNOWLEDGEMENT

State of NEW JERSEY )  
County of Union ) s.s.:On this 18<sup>th</sup> day of October, 2016, personally appeared before me **Libo Xu**, to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanellidis  
Notary PublicExecuted this 17 day of October, 2016.Sherman T. Waddell  
Sherman T. WaddellCHRISTINE M. KANEL  
Notary Public New Jersey  
I.D. # 2442057  
Commission Expires January 9, 2019

## ACKNOWLEDGEMENT

State of NEW JERSEY )  
County of Union ) s.s.:On this 17 day of October, 2016, personally appeared before me **Sherman T. Waddell** to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Christine M. Kanellidis  
Notary PublicCHRISTINE M. KANEL  
Notary Public of New Jersey  
I.D. # 2442057  
Commission Expires January 9, 2019

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
**John A. McCauley**

**ACKNOWLEDGEMENT**

Commonwealth of PENNSYLVANIA )  
 ) s.s.:  
County of \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me **John A. McCauley**, to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

\_\_\_\_\_  
Notary Public

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
**Jay A. Grobler**

**ACKNOWLEDGEMENT**

Commonwealth of PENNSYLVANIA )  
 ) s.s.:  
County of \_\_\_\_\_ )

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me **Jay A. Grobler** to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

\_\_\_\_\_  
Notary Public

## WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- |                         |                                                     |
|-------------------------|-----------------------------------------------------|
| (1) Thomas H. Graham,   | located at Scotch Plains, New Jersey 07076, USA,    |
| (2) Tao Yu,             | located at Edison, New Jersey 08820, USA,           |
| (3) Sherman T. Waddell, | located at Westfield, New Jersey 07090, USA,        |
| (4) John A. McCauley,   | located at Maple Glen, Pennsylvania 19002, USA,     |
| (5) Andrew Stamford,    | located at Chatham Township, New Jersey, 07928, USA |
| (6) Wensheng Liu,       | located at Edison, New Jersey 08820, USA            |
| (7) Jay A. Grobler,     | located at Gwynedd, Pennsylvania 19436, USA and     |
| (8) Libo Xu,            | located at Bridgewater, New Jersey 08807, USA       |

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NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Thomas H. Graham

\_\_\_\_\_  
Tao Yu

\_\_\_\_\_  
Andrew Stamford

\_\_\_\_\_  
Wensheng Liu

\_\_\_\_\_  
Libo Xu

**ACKNOWLEDGEMENT**

STATE of NEW JERSEY )  
County of \_\_\_\_\_ ) s.s.:

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, personally appeared before me **Thomas H. Graham, Tao Yu, Andrew Stamford, Wensheng Liu, and Libo Xu** to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

\_\_\_\_\_  
Notary Public

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Sherman T. Waddell

**ACKNOWLEDGEMENT**

State of NEW JERSEY )  
County of \_\_\_\_\_ ) s.s.:

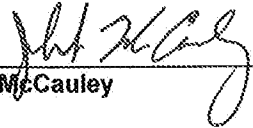
On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, personally appeared before me **Sherman T. Waddell** to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

\_\_\_\_\_  
Notary Public



Executed this 10 day of October, 2016.


  
\_\_\_\_\_  
John A. McCauley

**ACKNOWLEDGEMENT**


Commonwealth of PENNSYLVANIA )  
 ) s.s.:  
County of Montgomery \_\_\_\_\_ )

On this 10 day of October, 2016 personally appeared before me **John A. McCauley**, to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal) COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Dorothy M. Miller, Notary Public  
Upper Gwynedd Twp., Montgomery County  
My Commission Expires May 14, 2017  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

  
\_\_\_\_\_  
Notary Public

Executed this 10 day of OCTOBER, 2016.

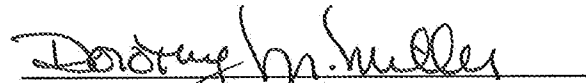
  
\_\_\_\_\_  
Jay A. Grobler

**ACKNOWLEDGEMENT**

Commonwealth of PENNSYLVANIA )  
 ) s.s.:  
County of Montgomery \_\_\_\_\_ )

On this 10 day of October, 2016, personally appeared before me **Jay A. Grobler** to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal) COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Dorothy M. Miller, Notary Public  
Upper Gwynedd Twp., Montgomery County  
My Commission Expires May 14, 2017  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

  
\_\_\_\_\_  
Notary Public