

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6667987

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
DANE CLAUSEN	12/04/2018
XAVIER FRADERA	12/10/2018
LIANGQIN GUO	12/05/2018
YONGXIN HAN	12/10/2018
SHUWEN HE	12/07/2018
JOSEPH KOZLOWSKI	12/11/2018
GUOQING LI	12/10/2018
THEODORE A. MARTINOT	12/10/2018
ALEXANDER PASTERNAK	12/10/2018
DAVID SLOMAN	12/10/2018
LI XIAO	12/06/2018
WENSHENG YU	01/02/2019
RUI ZHANG	12/10/2018
RECEIVING PARTY DATA	
Name:	MERCK SHARP & DOHME CORP.
Street Address:	126 EAST LINCOLN AVENUE
Internal Address:	RY862011A
City:	RAHWAY
State/Country:	NEW JERSEY
Postal Code:	07065
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17287256
CORRESPONDENCE DATA	
Fax Number:	
<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>	
Phone:	732-594-4488
Email:	US-DOCKET-PATENT@merck.com

Correspondent Name: MERCK
Address Line 1: P O BOX 2000
Address Line 4: RAHWAY, NEW JERSEY 07065-0907

ATTORNEY DOCKET NUMBER:	24656USPCT-
NAME OF SUBMITTER:	CHRISTINE KANELIDIS
SIGNATURE:	/Christine Kanellidis/
DATE SIGNED:	04/21/2021

Total Attachments: 41

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WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|------------------------------------------------|-------------------------------------------------------|
| (1) Dane Clausen, located at Rahway, NJ | (8) Theodore A. Martinot, located at Southborough, MA |
| (2) Xavier Fradera, located at Brookline, MA | (9) Alexander Pasternak, located at Jamaica Plain, MA |
| (3) Liangqin Guo, located at Monroe, NJ | (10) David Sloman, located at Brookline, MA |
| (4) Yongxin Han, located at Needham, MA | (11) Li Xiao, located at Cranbury, NJ |
| (5) Shuwen He, located at Fanwood, NJ | (12) Wensheng Yu, located at Edison, NJ |
| (6) Joseph Kozlowski, located at Princeton, NJ | (13) Rui Zhang, located at Plainsboro, NJ |
| (7) Guoqing Li, located at Belle Mead, NJ | |

(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:

NOVEL SUBSTITUTED PYRAZOLE COMPOUNDS AS INDOLEAMINE 2,3-DIOXYGENASE INHIBITORS

and/or in the following application(s):

U.S. Provisional Application No. 62/753,988 filed on 11/1/2018;

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 4th day of DECEMBER, 20 18.

D. Clausen

Dane Clausen

ACKNOWLEDGEMENT

State of New Jersey)

County of Union)

s.s.:

On this 4th day of December, 20 18, personally appeared before me Dane Clausen 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)

Dina A. Kuster
Notary Public
DINA A. KUSTER

NOTARY PUBLIC OF NEW JERSEY

My Commission Expires 8/7/2020

Executed this _____ day of _____, 20 _____.

Xavier Fradera

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)

County of Suffolk)

s.s.:

On this _____ day of _____, 20 _____, before me, the undersigned notary public, personally appeared Xavier Fradera, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:

My Commission Expires: _____

Executed this 5th day of December, 2018

Liangqin Guo
Liangqin Guo

ACKNOWLEDGEMENT

State of New Jersey)

County of Union)

s.s.:

On this 5th day of December, 2018, personally appeared before me Liangqin Guo 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)

Dina A. Kuster
Notary Public

DINA A. KUSTER
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 8/7/2020

Executed this _____ day of _____

Yongxin Han

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)

County of Suffolk)

s.s.:

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Yongxin Han, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:

My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Shuwen He

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Shuwen He 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_____.

Joseph Kozlowski

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Mercer)

On this _____ day of _____, 20_____, personally appeared before me Joseph Kozlowski 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 10th day of Dec., 20 18



Guoqing Li

ACKNOWLEDGEMENT


State of New Jersey

County of Union

) s.s.:
)
)

On this 10th day of December, 20 18, personally appeared before me Guoqing Li 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 OF NEW JERSEY
My Commission Expires 8/7/2020

Executed this _____ day of _____, 20 _____

Theodore A. Martinot

ACKNOWLEDGEMENT

Commonwealth of Massachusetts

County of Suffolk

)
) s.s.:
)

On this _____ day of _____, 20 _____, before me, the undersigned notary public, personally appeared Theodore A. Martinot, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public: _____
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Alexander Pasternak

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
County of Suffolk) s.s.:

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Alexander Pasternak, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____

David Sloman

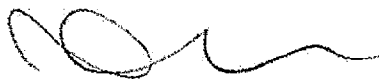
ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
County of Suffolk) s.s.:

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared David Sloman, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

Executed this 6th day of December, 2018.



Li Xiao

ACKNOWLEDGEMENT

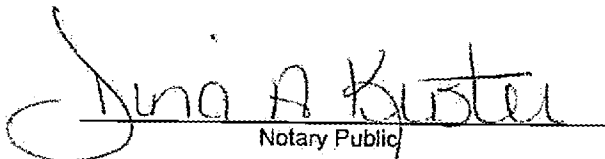
State of New Jersey)

County of Union)

) s.s.:

On this 6th day of December, 2018, personally appeared before me Li Xiao 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____.

Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)

County of Union)

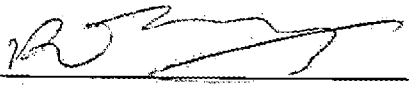
) s.s.:

On this _____ day of _____, 20____, personally appeared before me Wensheng Yu 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 10th day of December, 20 18


Rui Zhang

ACKNOWLEDGEMENT

State of New Jersey

County of Union

)
s.s.:

On this 10th day of December, 20 18, personally appeared before me Rui Zhang 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

DINA A. KUSTER
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 8/7/2020

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|------------------------------------------------|-------------------------------------------------------|
| (1) Dane Clausen, located at Rahway, NJ | (8) Theodore A. Martinot, located at Southborough, MA |
| (2) Xavier Fradera, located at Brookline, MA | (9) Alexander Pasternak, located at Jamaica Plain, MA |
| (3) Liangqin Guo, located at Monroe, NJ | (10) David Sloman, located at Brookline, MA |
| (4) Yongxin Han, located at Needham, MA | (11) Li Xiao, located at Cranbury, NJ |
| (5) Shuwen He, located at Fanwood, NJ | (12) Wensheng Yu, located at Edison, NJ |
| (6) Joseph Kozłowski, located at Princeton, NJ | (13) Rui Zhang, located at Plainsboro, NJ |
| (7) Guoqing Li, located at Belle Mead, NJ | |

(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:

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and/or in the following application(s):

U.S. Provisional Application No. 62/753,988 filed on 11/1/2018;

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 _____ day of _____, 20_____.

Dane Clausen

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Dane Clausen 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_____.

Xavier Fradera

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Xavier Fradera, proved to me through satisfactory evidence of identification, which was _____ to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:

My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Liangqin Guo

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Liangqin Guo 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_____.

Yongxin Han

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Yongxin Han, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this 7th day of December, 2018.

[Signature]
Shuwen He

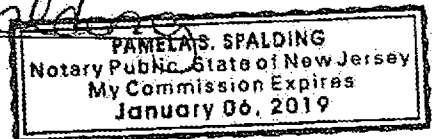
ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this 7th day of December, 2018, personally appeared before me Shuwen He 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)

Pamela S. Spalding
Notary Public



Executed this _____ day of _____, 20____.

Joseph Kozlowski

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Mercer)

On this _____ day of _____, 20____, personally appeared before me Joseph Kozlowski 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_____.

Guoqing Li

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Guoqing Li 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_____.

Theodore A. Martinot

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Theodore A. Martinot, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____

Alexander Pasternak

Commonwealth of Massachusetts)
County of Suffolk) s.s.:
)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Alexander Pasternak, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

Executed this _____ day of _____, 20_____

David Sloman

Commonwealth of Massachusetts)
County of Suffolk) s.s.:
)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared David Sfoman, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

Executed this _____ day of _____, 20_____.

Li Xiao

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Li Xiao 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_____.

Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Wensheng Yu 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_____.

Rui Zhang

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Rui Zhang 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|------------------------------------------------|-------------------------------------------------------|
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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_____.

Dane Clausen

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Dane Clausen 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_____.

Xavier Fradera

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Xavier Fradera, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Liangqin Guo

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Liangqin Guo 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_____.

Yongxin Han

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Yongxin Han, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20____.

Shuwen He

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20____, personally appeared before me Shuwen He 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 11th day of December, 2018.

Joseph Kozlowski
Joseph Kozlowski

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Mercer)

On this 11th day of December, 2018, personally appeared before me Joseph Kozlowski 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)

Dawn M. Mount
Notary Public

DAWN M. MOUNT
Notary Public of New Jersey
My Commission Expires July 16, 2022

Executed this _____ day of _____, 20_____.

Guoqing Li

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Guoqing Li 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_____.

Theodore A. Martinot

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Theodore A. Martinot, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Alexander Pasternak

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Alexander Pasternak, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

David Sloman

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared David Sloman, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Li Xiao

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Li Xiao 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_____.

Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Wensheng Yu 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_____.

Rui Zhang

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Rui Zhang 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|------------------------------------------------|-------------------------------------------------------|
| (1) Dane Clausen, located at Rahway, NJ | (8) Theodore A. Martinot, located at Southborough, MA |
| (2) Xavier Fradera, located at Brookline, MA | (9) Alexander Pasternak, located at Jamaica Plain, MA |
| (3) Liangqin Guo, located at Monroe, NJ | (10) David Sioman, located at Brookline, MA |
| (4) Yongxin Han, located at Needham, MA | (11) Li Xiao, located at Cranbury, NJ |
| (5) Shuwen He, located at Farwood, NJ | (12) Wensheng Yu, located at Edison, NJ |
| (6) Joseph Kozlowski, located at Princeton, NJ | (13) Rui Zhang, located at Plainsboro, NJ |
| (7) Guoqing Li, located at Belle Mead, NJ | |

(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:

NOVEL SUBSTITUTED PYRAZOLE COMPOUNDS AS INDOLEAMINE 2,3-DIOXYGENASE INHIBITORS

and/or in the following application(s):

U.S. Provisional Application No. 62/753,988 filed on 11/1/2018;

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 _____ day of _____, 20____.

Dane Clausen

ACKNOWLEDGEMENT

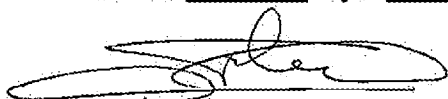
State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20____, personally appeared before me Dane Clausen 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 10 day of December, 2018.

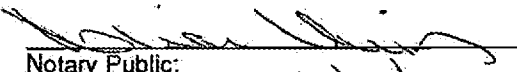


Xavier Fradera

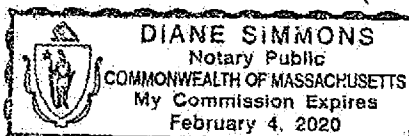
ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this 10th day of December, 2018, before me, the undersigned notary public, personally appeared Xavier Fradera, proved to me through satisfactory evidence of identification, which was his, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.


Notary Public:

My Commission Expires: 2/4/20



Executed this _____ day of _____, 20_____.

Liangqin Guo

ACKNOWLEDGEMENT

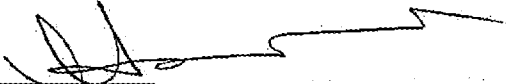
State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Liangqin Guo 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 10th day of December, 2018.

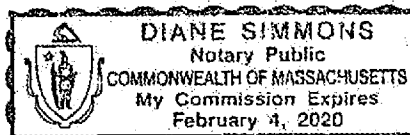

Yongxin Han

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this 10th day of December, 2018, before me, the undersigned notary public, personally appeared Yongxin Han, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.


Notary Public:
My Commission Expires: 2/24/20



Executed this _____ day of _____, 20_____.

Shuwen He

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Shuwen He 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_____.

Joseph Kozlowski

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Mercer)

On this _____ day of _____, 20_____, personally appeared before me Joseph Kozlowski 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_____.

Guoqing Li

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Guoqing Li 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 10th day of December, 2018.


Theodore A. Martinot

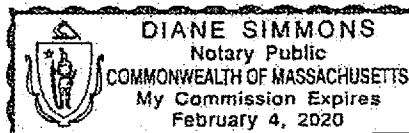
ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this 10th day of December, 2018, before me, the undersigned notary public, personally appeared Theodore A. Martinot, proved to me through satisfactory evidence of identification, which was DL 588937981, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.


Notary Public:

My Commission Expires: 2/4/20



Executed this 10th day of December, 2018.



Alexander Pasternak

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)


On this 10th day of December, 2018, before me, the undersigned notary public, personally appeared Alexander Pasternak, proved to me through satisfactory evidence of identification, which was DL S20713272 to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.



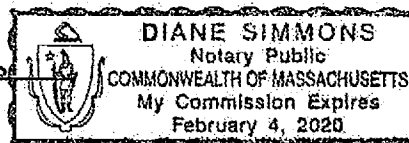


Notary Public:
My Commission Expires: 2/4/20

Executed this 10th day of December, 2018.



David Sloman



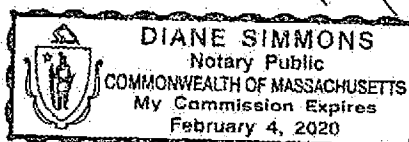
ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this 10th day of December, 2018, before me, the undersigned notary public, personally appeared David Sloman, proved to me through satisfactory evidence of identification, which was DL S66248386, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.



Notary Public:
My Commission Expires: 2/4/20



Executed this _____ day of _____, 20_____.

Li Xiao

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Li Xiao 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_____.

Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Wensheng Yu 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_____.

Rui Zhang

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Rui Zhang 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|------------------------------------------------|-------------------------------------------------------|
| (1) Dane Clausen, located at Rahway, NJ | (8) Theodore A. Martinot, located at Southborough, MA |
| (2) Xavier Fradera, located at Brookline, MA | (9) Alexander Pasternak, located at Jamaica Plain, MA |
| (3) Liangqin Guo, located at Monroe, NJ | (10) David Sloman, located at Brookline, MA |
| (4) Yongxin Han, located at Needham, MA | (11) Li Xiao, located at Cranbury, NJ |
| (5) Shuwen He, located at Fanwood, NJ | (12) Wensheng Yu, located at Edison, NJ |
| (6) Joseph Kozlowski, located at Princeton, NJ | (13) Rui Zhang, located at Plainsboro, NJ |
| (7) Guoqing Li, located at Belle Mead, NJ | |

(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:

NOVEL SUBSTITUTED PYRAZOLE COMPOUNDS AS INDOLEAMINE 2,3-DIOXYGENASE INHIBITORS

and/or in the following application(s):

U.S. Provisional Application No. 62/753,988 filed on 11/1/2018;

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 _____ day of _____, 20_____.

Dane Clausen

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Dane Clausen 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_____.

Xavier Fradera

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Xavier Fradera, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Liangqin Guo

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Liangqin Guo 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_____.

Yongxin Han

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Yongxin Han, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____.

Shuwen He

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Shuwen He 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_____.

Joseph Kozłowski

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Mercer)

On this _____ day of _____, 20_____, personally appeared before me Joseph Kozłowski 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_____.

Guoqing Li

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Guoqing Li 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_____.

Theodore A. Martinot

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
) s.s.:
County of Suffolk)

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Theodore A. Martinot, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: _____

Executed this _____ day of _____, 20_____

Alexander Pasternak

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
County of Suffolk) s.s.:

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared Alexander Pasternak, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

Executed this _____ day of _____, 20____

David Sloman

ACKNOWLEDGEMENT

Commonwealth of Massachusetts)
County of Suffolk) s.s.:

On this _____ day of _____, 20_____, before me, the undersigned notary public, personally appeared David Sloman, proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires:

Executed this _____ day of _____, 20_____.

Li Xiao

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Li Xiao 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 2nd day of January, 2019.

Wensheng Yu
Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union

On this 2nd day of January, 2019, personally appeared before me Wensheng Yu 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)

Dina A Kuster
Notary Public

DINA A. KUSTER
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 8/7/2020

Executed this _____ day of _____, 20_____.

Rui Zhang

ACKNOWLEDGEMENT

State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20_____, personally appeared before me Rui Zhang 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

Accepted and agreed to by ASSIGNEE Merck Sharp & Dohme Corp.

Signature: Catherine D. Fitch

Name: Catherine D. Fitch

Title: Managing Counsel, Patents

Date: 1-9-19

ACKNOWLEDGEMENT

State of New Jersey

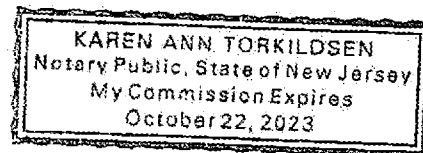
County of Union

)
s.s.:

On this 9th day of January, 2019, personally appeared before me Catherine D. Fitch 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)

Karen Ann Torkildsen
Notary Public



PATENT