506592188 04/05/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6638983

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DANE CLAUSEN	12/04/2018
PING CHEN	12/03/2018
XAVIER FRADERA	12/10/2018
LIANGQIN GUO	12/05/2018
YONGXIN HAN	12/10/2018
SHUWEN HE	12/07/2018
JONGWON LIM	12/10/2018
THEODORE A. MARTINOT	12/10/2018
ALEXANDER PASTERNAK	12/10/2018
LI XIAO	12/06/2018
WENSHENG YU	01/02/2019

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:	17282821

CORRESPONDENCE DATA

Fax Number: (732)594-4720

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.

using a lax number, if provided, if that is unsuccessful, it will be sent via 05 mail.

Email: US-DOCKET-PATENT@MERCK.COM

Correspondent Name: MERCK DOCKET PATENT
Address Line 1: 126 EAST LINCOLN AVENUE
Address Line 4: RAHWAY, UNITED STATES 07065

PATENT REEL: 055819 FRAME: 0943

506592188

ATTORNEY DOCKET NUMBER:	24649-US-PCT
NAME OF SUBMITTER:	CHRISTINE KANELLIDIS
SIGNATURE:	/CHRISTINE KANELLIDIS/
DATE SIGNED:	04/05/2021
Total Attachments: 29	
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> PATENT REEL: 055819 FRAME: 0944

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Dane Clausen, located at Rahway, NJ
- (2) Ping Chen, located at Edison, NJ
- (3) Xavier Fradera, located at Brookline, MA
- (4) Liangqin Guo, located at Monroe, NJ(5) Yongxin Han, located at Needham, MA
- (6) Shuwen He, located at Fanwood, NJ

- (7) Jongwon Lim, located at Lexington, MA
- (8) Theodore A. Martinot, located at Southborough, MA
- (9) Alexander Pasternak, located at Jamaica Plain, MA
- (10) Li Xiao, located at Cranbury, NJ
- (11) Wensheng Yu, located at Edison, 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 ARYLALKYL PYRAZOLE COMPOUNDS AS INDOLEAMINE 2.3-DIOXYGENASE INHIBITORS and/or in the following application(s):

U.S. Provisional Application No. 62/746,764	filed on <u>10/17/2018</u> ;	
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 a	and property herein conveyed are free and clear of	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.

Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this day of	ELLMBER_, 20_18
D. Con	
Dane Clausen	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union On this day of me known, and known by me to be the acknowledged that he (she) executed	personally appeared before me <u>Dane Clausen</u> , to be same person(s) described in and who executed the foregoing instrument, and 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
Executed this $3rd$ day of 5	Pec., 2018.
Ping/Chen	<u></u>
ACKNOWLEDGEMENT	
State of New Jersey)	
On this day of day of acknowledged that he (she) executed	, 20, personally appeared before me Ping Chen to ne same person described in and who executed the foregoing instrument, and the same, of his (her) own free will for the purpose set forth.
(Seal)	Jina A Kuster Notary Public
	DINA A. KUSTER NOTARY PUBLIC OF NEW JERSEY My Commission Expires 8/7/2020

Page 2 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this da	y of	, 20		
Xavier Fradera				
ACKNOWLEDGEMENT				
Commonwealth of Massach	nusetts)) s.s.:			
County of Suffolk) 5,5			
On this	day of r Fradera, proved to me th to be the perso e/she signed it voluntarily	, 20, nrough satisfactory evi on whose name is sign for its stated purpose.	, before me, the undersigned notar idence of identification, which was ned on the preceding document, and	y public,
	N M	otary Public: ly Commission Expired	s:	
Executed this $5^{(7)}$ d	ay of <u>Decembe</u>	, 20 1 8	<u>-</u>	
Lianggin Gub				
ACKNOWLEDGEMENT				
County of Union On this to me known, and known bracknowledged that he (she	day of COCM when to be the same person	on described in and what so there are the sound from will for	_, personally appeared before me <u>Liz</u> no executed the foregoing instrument,	
(Seal)	, executed the same, of the	Ning A	Public USTER ENEW JERSEY	,

Page 3 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20		
Yongxin Han				
ACKNOWLEDGEMENT				
Commonwealth of Massa County of Suffolk	achusetts)) s.s.)	:		
On this	day of ngxin Han, proved to , to b t he/she signed it vo	, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20	, before me, the unde evidence of identification e is signed on the preced ose.	ersigned notary public, , which was ling document, and
		Notary Public: My Commission Ex	pires:	_
Executed this	_ day of	, 20		
Shuwen He		···		
ACKNOWLEDGEMENT				
State of New Jersey County of Union)) s.s.:)			
On this to me known, and known acknowledged that he (si	by me to be the sar	, 20 me person described in ar me, of his (her) own free w	id who executed the fore	red before me <u>Shuwen He</u> going instrument, and rth.
(Seal)			otary Public	

Page 4 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20
Jongwon Lim		•
ACKNOWLEDGEME	NT	
Commonwealth of Ma	assachusetts)	
County of Suffolk	ssachusetts)) s.s.:)	
personally appeared,	<u>Jongwon Lim,</u> proved to	, 20, before me, the undersigned notary public, me through satisfactory evidence of identification, which was be the person whose name is signed on the preceding document, and ntarily for its stated purpose.
acknowledged to me	that he/she signed it volu	ntarily for its stated purpose.
		Notary Public: My Commission Expires:
		my Commission Expired.
Executed this	day of	, 20
Theodore A. Martino	ot .	
ACKNOWLEDGEME	NT	
Commonwealth of Ma		
County of Suffolk) s.s.:)	
On this personally appeared		, 20, before me, the undersigned notary public, roved to me through satisfactory evidence of identification, which was to be the person whose name is signed on the preceding document, at
acknowledged to me		ntarily for its stated purpose.
		Notary Public: My Commission Expires:

Page 5 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20	
Alexander Pasterna	ak	_	
ACKNOWLEDGEMI	ENT		
Commonwealth of M	lassachusetts)) s.s.)	:	
	to be	, 20, before me, the undersigned notary public, proved to me through satisfactory evidence of identification, which was a the person whose name is signed on the preceding document, and luntarily for its stated purpose.	
		Notary Public: My Commission Expires:	
Executed this 6	M day of Dec	ember, 20 18.	
Li Xiao	<u> </u>	<u>- U</u>	
ACKNOWLEDGEM	ENT		
State of New Jersey County of Union On this known, and known b acknowledged that h	day of y me to be the same per	personally appeared before me <u>Li Xiao</u> to rson described in and who executed the foregoing instrument, and me, of his (her) own free will for the purpose set forth.	me
(Seal)		Notary Publicy DINA A. KUSTER	
		NOTARY PUBLIC OF NEW JERSEY My Commission Expires 8/7/2020	

Page 6 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of		, 20		
Wensheng Yu					
ACKNOWLEDGEMENT					
State of New Jersey)		.			
County of Union).) s.s.:			
On this to me known, and knowr acknowledged that he (s					e <u>Wensheng Yu</u> instrument, and
(Seal)					
			No	tary Public	

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE.

- (1) Dane Clausen, located at Rahway, NJ
- (2) Ping Chen, located at Edison, NJ
- (3) Xavier Fradera, located at Brookline, MA
- (4) Liangqin Guo, located at Monroe, NJ
- (5) Yongxin Han, located at Needham, MA
- (6) Shuwen He, located at Fanwood, NJ

- (7) Jongwon Lim, located at Lexington, MA
- (8) Theodore A. Martinot, located at Southborough, MA
- (9) Alexander Pasternak, located at Jamaica Plain, MA
- (10) Li Xiao, located at Cranbury, NJ
- (11) Wensheng Yu, located at Edison, 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 ARYLALKYL PYRAZOLE COMPOUNDS AS INDOLEAMINE 2,3-DIOXYGENASE INHIBITORS

and/or in the following application(s):

U.S. Provisional Application No. <u>62/746,764</u> filed o	n <u>10/17/2018</u> ;	
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.

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Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20	
Dane Clausen			
ACKNOWLEDGEMENT	г		
State of New Jersey)) s.s.:		
County of Union)		
On this me known, and known k acknowledged that he (s	day of by me to be the same she) executed the sa	, 20, personally appeared before me <u>Dane Clause</u> person(s) described in and who executed the foregoing instrument, and me, of his (her) own free will for the purpose set forth.	<u>en,</u> to
(Seal)			
		Notary Public	
Executed this	day of	20	
Ping Chen			
ACKNOWLEDGEMEN	т		
State of New Jersey)		
County of Union) s.s.:)		
On this me known, and known k acknowledged that he (s	day of by me to be the same she) executed the sa	, 20, personally appeared before me <u>Ping Cl</u> e person described in and who executed the foregoing instrument, and me, of his (her) own free will for the purpose set forth.	<u>hen</u> to
(Seal)			
		Notary Public	

Page 2 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20
Xavier Fradera		-
ACKNOWLEDGEMENT	r	
Commonwealth of Mass	sachusetts)	
County of Suffolk) s.s.:)	
	to be the	, 20, before me, the undersigned notary public, o me through satisfactory evidence of identification, which was a person whose name is signed on the preceding document, and intarily for its stated purpose.
acknowledged to the trie	at hersite signed it void	many for its stated purpose.
		Notary Public: My Commission Expires:
Executed this	_ day of	, 20
Liangqin Guo		
ACKNOWLEDGEMENT	г	
State of New Jersey)	
County of Union) s.s.:)	
	n by me to be the same	, 20, personally appeared before me <u>Liangqin Guo</u> e person described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)		
(OCCI)		Notary Public
		NOSO PIDIC

Page 3 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this da	ay of	, 20		
Yongxin Han				
ACKNOWLEDGEMENT				
Commonwealth of Massac	husetts)) s.s.:			
County of Suffolk) 3.5			
On this personally appeared <u>Yong</u> acknowledged to me that h	day of to me the, to be the, to, to	, 20 nrough satisfactory ev person whose name i ly for its stated purpos	_, before me, the unders idence of identification, was signed on the precedinge.	signed notary public, which was g document, and
		Notary Public:		
		My Commission Expi	res:	
Executed this 7th	day of Decemb	Der , 20 <u>18</u>	<u></u> .	•
ACKNOWLEDGEMENT				
State of New Jersey County of Union)) s.s.:)	1		
On thisto me known, and known to me known, and known to acknowledged that he (she	by me to be the same per	rson described in and his (her) own free wil	who executed the forego	ed before me Shuwen He bing instrument, and n.
(Seal)		Pamala	(S. 500 ld	,
		Not		SPALDING ate of New Jersey sion Expires 06, 2019

Page 4 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20
Jongwon Lim		
ACKNOWLEDGEME	ENT	
Commonwealth of Ma	assachusetts)) s.s.:	
On this personally appeared acknowledged to me	day of	, 20, before me, the undersigned notary public, me through satisfactory evidence of identification, which was be the person whose name is signed on the preceding document, and name that its stated purpose.
		Notary Public: My Commission Expires:
Executed this	day of	
Theodore A. Martin	ot	
ACKNOWLEDGEMI	ENT	
Commonwealth of M	lassachusetts)) s.s.:	
On this personally appeared	, t	, 20, before me, the undersigned notary public, roved to me through satisfactory evidence of identification, which was to be the person whose name is signed on the preceding document, and ntarily for its stated purpose.
		Notary Public: My Commission Expires:

Page 5 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of		, 20			
Alexander Pasternak						
ACKNOWLEDGEMENT	-					
Commonwealth of Mass	achusetts)) s.					
County of Suffolk) s.)	S.:				
On this	day of exander Pasternak , to l	<u>c</u> , proved to me	, 20 e through satisfa vhose name is:	, before me, t actory evidence o signed on the pre	he undersigned not identification, we ceding document	otary public, hich was t, and
acknowledged to me tha	t he/she signed it v	oluntarily for its	s stated purpos	e.		
		Notary My Co	Public:	es:		
		IVIY CO	mmasion Expir	cs		
Executed this	day of		, 20			,
Li Xiao						
ACKNOWLEDGEMENT	г					
State of New Jersey)					
County of Union) s.s.:)					
On this known, and known by m acknowledged that he (s	day of ne to be the same p she) executed the s	erson describe ame, of his (he	, 20 d in and who exer) own free will	, personally a xecuted the foreg for the purpose s	ppeared before n oing instrument, a set forth.	ne <u>Li Xiao</u> to me and
(Seal)						
			Nota	nry Public		

Page 6 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	da y of		20		
Wensheng Yu					
ACKNOWLEDGEMEN	NT				
State of New Jersey)	,) s.s.:			
County of Union	,				
On this to me known, and kno acknowledged that he	day of day of wn by me to be the (she) executed the	e same person(s) d e same, of his (her)	_, 20_ lescribed in a) own free wil	, personally appeare nd who executed the I for the purpose set	d before me Wensheng Yu foregoing instrument, and forth.
(Seal)					
			Not	ary Public	

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Dane Clausen, located at Rahway, NJ
- (2) Ping Chen, located at Edison, NJ
- (3) Xavier Fradera, located at Brookline, MA
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- (11) Wensheng Yu, located at Edison, 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 ADVIALKY, DYRAZOLE COMPOLINDS AS INDOLEAMINE 2 3-DIOXYGENASE INHIBITORS

NOVEL ARTLAURIL PIRAZOLE COM	FOUNDS AS INDOCERMINE 2,3-DIOX I GENASE	- IIVI IIDI I ONO
and/or in the following application(s):		
U.S. Provisional Application No. 62/746,7	764 filed on 10/17/2018;	
U.S. Application No.	having-a filing date of	; and

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.

PCT International Application No. ______ having a filing date of ______.

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.

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Executed this	day of	, 20
Dane Clausen		
ACKNOWLEDGEMENT		
State of New Jersey)) s.s.:)	
County of Union)	
me known, and known by	v me to be the same pe	, 20, personally appeared before me <u>Dane Clausen</u> , to erson(s) described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)		
		Notary Public
Executed this	_ day of	, 20
Ping Chen		
ACKNOWLEDGEMENT	г	
State of New Jersey)	
County of Union) s.s.:)	
me known, and known b	by me to be the same p	, 20, personally appeared before me <u>Ping Chen</u> to erson described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)		
		Notary Public

Page 2 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this 10 day of Decarbon, 20 18.	
Xavier Fradera	
ACKNOWLEDGEMENT	
Commonwealth of Massachusetts)	
) s.s.: County of Suffolk)	
On this day of (20	notary public, as and
Notary Public: My Commission Expires:	
Executed this day of, 20	HUSETTS)
Liangqin Guo	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union) s.s.:	
On this day of, 20, personally appeared before retorme known, and known by me to be the same person described in and who executed the foregoing instruacknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.	me <u>Liangqin Guo</u> ıment, and
(Seal)	
Notary Public	
Notary Public	

Page 3 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this day of	December, 2018.
Yongxin Han	
ACKNOWLEDGEMENT	
Commonwealth of Massachusetts	
County of Suffolk) s.s.:)
111 - 11 130	of <u>Jecen be</u> , 20 <u>/ &</u> , before me, the undersigned notary public, a, proved to me through satisfactory evidence of identification, which was to be the person whose name is signed on the preceding document, and signed it voluntarily for its stated purpose.
acknowledged to me that ne/sne	igned it voluntarily for its stated purpose.
	Notary Public: My Commission Expires: 424
	DIANE SIMMONS Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires
Executed this day of	
Shuwen He	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union)	S.S.:
On this day to me known, and known by me t acknowledged that he (she) exec	of, 20, personally appeared before me <u>Shuwen He</u> be the same person described in and who executed the foregoing instrument, and uted the same, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public

Page 4 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

REEL: 055819 FRAME: 0962

Executed this 10 day of December, 2018.
Commanda de la commanda del commanda de la commanda del commanda de la commanda del commanda de la commanda del commanda d
Jongwqr/Lim
ACKNOWLEDGEMENT
Commonwealth of Massachusetts)
County of Suffolk) s.s.:
On this day of d
Notary Public: My Commission Expires: DIANE SIMMONS
Executed this
Theodore A. Martinot
ACKNOWLEDGEMENT
Commonwealth of Massachusetts)) s.s.:
County of Suffolk)
On this
Notary Public: My Commission Expires: 214/20

DIANE SIM MONS
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 4, 2020
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Domne Corp. 11/04/2010

Executed this What day of Do Com	<u> </u>
Me Me	·
Alexander Pasternak	
ACKNOWLEDGEMENT	
Commonwealth of Massachusetts)	
County of Suffolk) s.s.:	
personally appeared Alexander Pasternak, prov	before me, the undersigned notary public, red to me through satisfactory evidence of identification, which was person whose name is signed on the preceding document, and wrily for its stated purpose.
	Notary Public: My Commission Expires: 2 14 /20
Executed this day of	DIANE SIMMONS Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires February 4, 2020
Li Xiao	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union) s.s.:	1
On this day of known, and known by me to be the same person acknowledged that he (she) executed the same, of	, 20, personally appeared before me <u>Li Xiao</u> to me described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	Notary Public

Page 6 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20		
Wensheng Yu				
ACKNOWLEDGEME	≣NT			
State of New Jersey))	.		
County of Union)) s.s.:		
On this to me known, and kn acknowledged that h	day of own by me to be the e (she) executed the	ne same person(s) described in and ne same, of his (her) own free will f	personally appeared before me y d who executed the foregoing ins for the purpose set forth.	Vensheng Yu, trument, and
(Seal)				
		Notar	y Public	

REEL: 055819 FRAME: 0965

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Dane Clausen, located at Rahway, NJ
- (2) Ping Chen, located at Edison, NJ
- (3) Xavier Fradera, located at Brookline, MA
- (4) Lianggin Guo, located at Monroe, NJ
- (5) Yongxin Han, located at Needham, MA
- (6) Shuwen He, located at Fanwood, NJ

- (7) Jongwon Lim, located at Lexington, MA
- (8) Theodore A. Martinot, located at Southborough, MA
- (9) Alexander Pasternak, located at Jamaica Plain, MA
- (10) Li Xiao, located at Cranbury, NJ
- (11) Wensheng Yu, located at Edison, 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 ARYLALKYL PYRAZOLE COMPOUNDS AS INDOLEAMINE 2,3-DIOXYGENASE INHIBITORS and/or in the following application(s):

U.S. Provisional Application No. 62/746,764	filed on <u>10/17/2018;</u>	
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 a	nd properly herein conveyed are free and clea	ar of any encumbran

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.

Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this da	ay of	, 20
Dane Clausen		_
ACKNOWLEDGEMENT		
State of New Jersey)) s.s.:	
County of Union	ý	
On this	_ day of me to be the same r	, 20, personally appeared before me <u>Dane Clausen</u> , to person(s) described in and who executed the foregoing instrument, and
acknowledged that he (she	e) executed the same	e, of his (her) own free will for the purpose set forth.
(Seal)		
		Notary Public
Executed this	day of	, 20
Ping Chen	- AVA	
ACKNOWLEDGEMENT		
State of New Jersey	ì	
County of Union) s.s.:)	
On this me known, and known by r acknowledged that he (she	day of me to be the same p e) executed the sam	, 20, personally appeared before me <u>Ping Chen</u> to person described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)		
(,		Notary Public
		· · · · · · · · · · · · · · · · · · ·

Page 2 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this day o	f	, 20
Xavier Fradera		
ACKNOWLEDGEMENT		
Commonwealth of Massachus	etts)	
County of Suffolk	etts)) s.s.:)	
On this	to be the person v	, 20, before me, the undersigned notary public, ugh satisfactory evidence of identification, which was whose name is signed on the preceding document, and its stated purpose.
acknowledged to tile that tieval	ie signed it voluntarily for	ns stateu purpose.
	Nota My C	ry Public: Commission Expires:
Executed this day	of	, 20
Liangqin Guo		
ACKNOWLEDGEMENT		
State of New Jersey)	
County of Union) s.s.:)	
On this come known, and known by m acknowledged that he (she) ex	e to be the same person of	, 20, personally appeared before me <u>Lianggin Guo</u> described in and who executed the foregoing instrument, and ner) own free will for the purpose set forth.
(Seal)		
		Notary Public

Page 3 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	. 20		
Yongxin Han		-		
ACKNOWLEDGEMENT				
Commonwealth of Mass County of Suffolk	achusetts)) s.s.:)			
On this personally appeared You acknowledged to me that	day of ngxin Han, proved to , to be it he/she signed it volu	, 20 me through satisfactory e the person whose name ntarily for its stated purpo	, before me, the unders widence of identification, was signed on the preceding see.	igned notary public, rhich was g document, and
		Notary Public: My Commission Ex	pires:	
Executed this	_ day of	, 20	·	
Shuwen He		<u></u>		
ACKNOWLEDGEMENT	7			
State of New Jersey County of Union)) s.s.:)			
On this to me known, and knowi acknowledged that he (s	day of n by me to be the sam she) executed the sam	e person described in an	, personally appeare d who executed the forego ill for the purpose set forth	ing instrument, and
(Seal)		No	tary Public	

Page 4 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of		20			
Jongwon Lim						
ACKNOWLEDGEME	NT					
Commonwealth of Ma	ssachusetts)	s.s.:				
On this	day of longwon Lim, prov hat he/she signed it	ed to me through _, to be the perso voluntarily for its	, 20 satisfactory on whose nat stated purpo	, before me, th evidence of ide me is signed or ose.	e undersigned nontrification, which the preceding d	otary public, was ocument, and
			Public: nmission Ex	pires:		
Executed this	day of		, 20			
Theodore A. Martino	t					
ACKNOWLEDGEME	NT					
Commonwealth of Ma		s.s.:				
On this personally appeared acknowledged to me		, to be the pe	through sati	sfactory eviden name is signed	he undersigned ce of identification on the preceding	notary public, on, which was g document, and
			Public:	• • • • • • • • • • • • • • • • • • • •		

Page 5 of 7
Computer Generated Template "Assignment-Merck Sharp & Dofime, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this	day of	, 20
Alexander Pasternak		
ACKNOWLEDGEMENT		
Commonwealth of Massa County of Suffolk	achusetts)) s.s.:)	
	, to be the	, 20, before me, the undersigned notary public, by before me, the undersigned notary public, by before me through satisfactory evidence of identification, which was e person whose name is signed on the preceding document, and tarily for its stated purpose.
		Notary Public: My Commission Expires:
Executed this	_ day of	, 20
Li Xiao		,
ACKNOWLEDGEMENT		
State of New Jersey County of Union)) s.s.:)	
known, and known by m	e to be the same persor	, 20, personally appeared before me <u>Li Xiao</u> to me n described in and who executed the foregoing instrument, and , of his (her) own free will for the purpose set forth.
(Seal)		
		Notary Public

Page 6 of 7
Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11/04/2010

Executed this 2nd day of January, 20 19.

Wensheng Yu

ACKNOWLEDGEMENT

State of New Jersey)

On this day of January, 20 19.

On this day of January, 20 19.

Line of New Jersey)

On this day of January, 20 19.

The personally appeared before me Wensheng 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 (fier) own free will for the purpose set forth.

(Seal)

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

Attorney Docket No.: 24649

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

Signature:

Name: Catherine D. Fitch

Title:

Managing Counsel, Patents

Date:

1-9-19

ACKNOWLEDGEMENT

State of New Jersey

County of Union

) s.s.:

(Seal)

Notary Public

KAREN ANN TORKILDSEN Notary Public, State of New Jersey My Commission Expires October 22, 2023

> PATENT REEL: 055819 FRAME: 0973