PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5090198

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEIGUO LIU	03/13/2017
FA-XIANG DING	03/13/2017
WANYING SUN	03/13/2017
REYNALDA KEH DEJESUS	03/13/2017
HAIFENG TANG	03/03/2017
XIANHAI HUANG	03/13/2017
JINLONG JIANG	03/13/2017
YAN GUO	03/13/2017
HONGWU WANG	03/13/2017

RECEIVING PARTY DATA

Name:	MERCK SHARP & DOHME CORP.	
Street Address:	126 EAST LINCOLN AVENUE	
Internal Address:	RY86-2011A	
City:	RAHWAY	
State/Country:	NEW JERSEY	
Postal Code:	07065	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16076781

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.

Phone: 732 594-4000

Email: us_efs@merck.com

Correspondent Name: MERCK & CO., INC.

Address Line 1: P. O. BOX 2000

Address Line 2: RY86-2011A

Address Line 4: RAHWAY, NEW JERSEY 07065

ATTORNEY DOCKET NUMBER: 24312-US-PCT

505043447 REEL: 046597 FRAME: 0026

PAIENI

NAME OF SUBMITTER:	PAMELA SPALDING	
SIGNATURE:	/Pamela Spalding/	
DATE SIGNED:	08/09/2018	
Total Attachments: 12		
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> PATENT REEL: 046597 FRAME: 0027

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Weiguo Liu, located at Princeton, NJ
- (2) Fa-Xiang Ding, located at Staten Island, NY
- (3) Wanying Sun, located at Edison, NJ
- (4) Reynalda Keh DeJesus, located at East Brunswick, NJ
- (5) Haifeng Tang, located at Metuchen, NJ

- (6) Xianhai Huang, located at Warren, NJ
- (7) Jinlong Jiang, located at Scotch Plains, NJ
- (8) Yan Guo, located at Westfield, NJ
- (9) Hongwu Wang, located at Westfield, 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:

BICYCLIC ARYL MONOBACTAM COMPOUNDS AND METHODS OF USE THEREOF FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):				
U.S. Provisional Application No. 62/304,447 filed	on <u>03/07/2016;</u>			
U.S. Application No. <u>16/076,781</u>	having a filing date of _	8/9/2018	; and	
PCT International Application No. PCT/US2017/0	20303 having a	filing date of _	3/2/2017	·

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 13^{+h} day of $Mach, 2017$.
Weiguo Liu
ACKNOWLEDGEMENT
State of New Jersey)) s.s.: County of Union)
On this
(Seal) Notary Public PAMELA'S: SPALDING Notary Public. State of New Jersey My Commission Expires January 06, 2019
Executed this 13 th day of Manch, 2017.
Fa-Xiang Ding
ACKNOWLEDGEMENT
State of New Jersey)) s.s.: County of Union)
On this 13th day of Manager Ma
(Seal) Dome (0.5.50ald.00
Notary Public PAMELA S. SPALDING Notary Public, State of New Jersey My Commission Expires January 06, 2019

Page 2 of 6 Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 1747ENT

Attorney Docket No.: 24312 **ACKNOWLEDGEMENT**)) s.s.:) State of New Jersey County of Union On this 13th day of Monch, 2017, personally appeared before me Wanying Sun 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. PAMELAS, SPALDING Notary Public, State of New Jersey My Commission Expires January 06, 2019 **ACKNOWLEDGEMENT** State of New Jersey County of Union

(Seal)

Public PAMELA S. SPALDING
Notary Public, State of New Jersey
My Commission Expires
January 06, 2019

Executed this day of	, 20
Haifeng Tang	
ACKNOWLEDGEMENT	
State of New Jersey)) s.s.:	
County of Middlesex)	
On this day of known, and known by me to be the same person(s) acknowledged that he (she) executed the same, of	, 20, personally appeared before me Haifeng Tang to me described in and who executed the foregoing instrument, and his (her) own free will for the purpose set forth.
(01)	
(Seal)	Notary Public
	Notary Public
Executed this <u>13th</u> day of <u>Monch</u>	
and the second s	
Xianhai Huang	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union) s.s.:	·
On this 13+h day of Man of known, and known by me to be the same person de acknowledged that he (she) executed the same, of), 20 <u>/7</u> , personally appeared before me Xianhai Huang to me escribed in and who executed the foregoing instrument, and his (her) own free will for the purpose set forth.
(Seal)	Position 5 5000 dia community
	Notary Public PAMELA S. SPALDING Notary Public, State of New Jersey
	My Commission Expires January 06, 2019

Page 4 of 6
Computer Generated Template "Assignment-Merck Sharp & Dohme, Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 1 PAOTENT

Executed this 13th day of Manch, 2017.
Jinlong Jiang
ACKNOWLEDGEMENT
State of New Jersey)
County of Union) s.s.:
On this 13 day of Month, 2017, personally appeared before me Jinlong Jiang 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 State of New Jersey Notary Public State of New Jersey
My Commission Expires January 06, 2019
Executed this 13 th day of March 2017
Then less
Yan Guo
ACKNOWLEDGEMENT
State of New Jersey)
County of Union) s.s.:
On this 13th day of M (200), 2017, personally appeared before me Yan Guo 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) $Q = A \leq S \leq A $
Notary Public PAMELA S. SPALDING
Notary Public, State of New Jersey My Commission Expires January 86, 2019

Page 5 of 6
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11

Executed this 10th	day of <u>Manch</u> , 20 <u>17</u>
-Mongwu Wang	43
ACKNOWLEDGEMENT	
State of New Jersey)) s.s.:
County of Union	
known, and known by me	day of, 20, 20, personally appeared before me Hongwu Wang to me to be the same person(s) described in and who executed the foregoing instrument, and ne) executed the same, of his (her) own free will for the purpose set forth.
(Seal)	Landa 5 Spalding Notary Public
	PAMELAS. SPALDING Notary Public, State of New Jersey My Commission Expires January 06, 2019

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Weiguo Liu, located at Princeton, NJ
- (2) Fa-Xiang Ding, located at Staten Island, NY
- (3) Wanying Sun, located at Edison, NJ
- (4) Reynalda Keh DeJesus, located at East Brunswick, NJ
- (5) Haifeng Tang, located at Metuchen, NJ

- (6) Xianhai Huang, located at Warren, NJ
- (7) Jinlong Jiang, located at Scotch Plains, NJ
- (8) Yan Guo, located at Westfield, NJ
- (9) Hongwu Wang, located at Westfield, 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:

BICYCLIC ARYL MONOBACTAM COMPOUNDS AND METHODS OF USE THEREOF FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):

U.S. Provisional Application No. <u>62/304,447</u> filed on <u>03/07/2016</u> ;			
U.S. Application No. <u>16/076,781</u>	having a filing date of 8/9/2018	; and	
PCT International Application No.	PCT/US2017/020303 having a filing date of	3/2/2017	

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
Weiguo Liu		
ACKNOWLEDGEMEN	NT	
State of New Jersey)) s.s.:	
County of Union)	
known, and known by	me to be the same persor	, 20, personally appeared before me Weiguo Liu to me n(s) described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)		
		Notary Public
		·
Executed this	day of	20
Excounce the	day or	
Fa-Xiang Ding	4.44	
ACKNOWLEDGEMEN	NT	
State of New Jersey		
County of Union) s.s.:)	
On this known, and known by acknowledged that he	me to be the same persor (she) executed the same,	, 20, personally appeared before me Fa-Xiang Ding 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

Executed this day of	, 20
Wanying Sun	
ACKNOWLEDGEMENT	
State of New Jersey) s.s.:	
County of Union)	
On this day of known, and known by me to be the same perso acknowledged that he (she) executed the same	, 20, personally appeared before me Wanying Sun to me on(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
executed this day of	
	<u> </u>
Reynalda Keh DeJesus	
ACKNOWLEDGEMENT	
State of New Jersey)	
County of Union) s.s.:	
On this day of DeJesus to me known, and known by me to be and colorant day of the the (she) executed the same as a second colorant day of	, 20, personally appeared before me Reynalda Keh e the same person described in and who executed the foregoing instrument, same, of his (her) own free will for the purpose set forth.
and acknowledged that he (she) executed the s	same, or me (ner) own nee will for the purpose section.
(Seal)	
	Notary Public

Page 3 of 6
Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 11640TENT

Executed this 3rd day of Morch , 2017.
Haifeng Tang
ACKNOWLEDGEMENT
State of New Jersey)) s.s.:
) s.s.: County of Middlesex On this
(Seal) State of New Jersey My Commission Expires Sept. 27, 2018 FLORENCE M Odlicambo Notary Public
Annument of the second
Executed this day of, 20,
Xianhai Huang
ACKNOWLEDGEMENT
State of New Jersey)
County of Union) s.s.:
On this day of, 20, personally appeared before me Xianhai Huang 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
Jinlong Jiang		
ACKNOWLEDGEMENT		
State of New Jersey)) s.s.:	
County of Union) 5.5	
known, and known by me	e to be the same perso	, 20, personally appeared before me Jinlong Jiang to me on(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
		Notary Public
Executed this	day of	, 20
Yan Guo		
ACKNOWLEDGEMENT		
State of New Jersey		
County of Union) s.s.:)	
and known by me to be		, 20, personally appeared before me Yan Guo to me knowr ibed in and who executed the foregoing instrument, and acknowledged that ee will for the purpose set forth.
(Seal)		
•		Notary Public

Page 5 of 6 Computer Generated Template "Assignment-Merck Sharp & Dohme. Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 1 PACTENT

		•		
Executed this	_ day of	, 20		
Hongwu Wang				
ACKNOWLEDGEMEN	т			
State of New Jersey)) s.s.:			
County of Union) S.S)			
On this known, and known by n acknowledged that he (day of me to be the same po (she) executed the s	, 20, persona erson(s) described in and who exec ame, of his (her) own free will for th	ally appeared before me licuted the foregoing instru ne purpose set forth.	Hongwu Wang to m ment, and
(Seal)				
		Notary Pt	ublic	

RECORDED: 08/09/2018