

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6034829

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
TESFAYE BIFTU	12/01/2017
XIANHAI HUANG	12/04/2017
WEIGUO LIU	12/04/2017
WEIDONG PAN	11/15/2017
MIN PARK	11/18/2017
ALEXANDER PASTERNAK	12/04/2017
WANYING SUN	12/04/2017
HAIFENG TANG	11/17/2017
YI ZANG	11/14/2017
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:	16651456
CORRESPONDENCE DATA	
Fax Number:	(732)594-4720
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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:	24514-US-PCT

PATENT

NAME OF SUBMITTER:	PAMELA SPALDING
SIGNATURE:	/Pamela Spalding/
DATE SIGNED:	03/27/2020

Total Attachments: 30
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WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|--|---|
| (1) Tesfaye Biftu, located at Freehold, NJ | (6) Alexander Pasternak, located at Princeton, NJ |
| (2) Xianhai Huang, located at Warren, NJ | (7) Wanying Sun, located at Edison, NJ |
| (3) Weiguo Liu, located at Princeton, NJ | (8) Haifeng Tang, located at Metuchen, NJ |
| (4) Weidong Pan, located at Hillsborough, NJ | (9) Yi Zang, located at Princeton, NJ |
| (5) Min Park, located at Whippany, 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:

CHROMANE MONOBACTAM COMPOUNDS FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):

U.S. Provisional Application No. 62/566,799 filed on 10/02/2017;

U.S. Application No. 16/651,456 having a filing date of 3/27/2020; and

PCT International Application No. PCT/US2018/053039 having a filing date of 9/27/2018.

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____.

Tesfaye Biftu

ACKNOWLEDGEMENT


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

On this _____ day of _____, 20____, personally appeared before me **Tesfaye Biftu** 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 4th day of December, 2017.



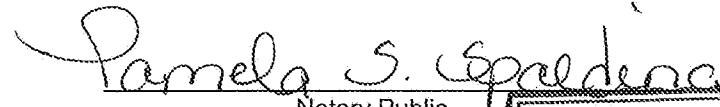
Xianhai Huang

ACKNOWLEDGEMENT

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

On this 4th day of December, 2017, 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

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

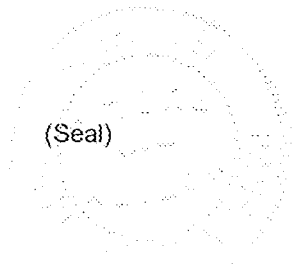
Executed this 4th day of December, 2017.

Weiguo Liu
Weiguo Liu

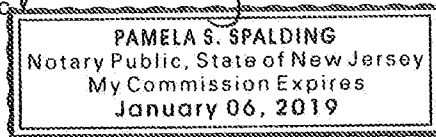
ACKNOWLEDGEMENT

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

On this 4th day of December, 2017, personally appeared before me **Weiguo Liu** to me known, and known by me to be the same person(s) described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.



Pamela S. Spalding
Notary Public



Executed this _____ day of _____, 20____.

Weidong Pan

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Weidong Pan** 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____.

Min Park

ACKNOWLEDGEMENT

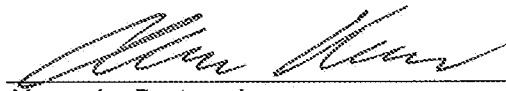
State of New Jersey)
) s.s.:
County of Morris)

On this _____ day of _____, 20____, personally appeared before me **Min Park** 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 4th day of December, 2017.



Alexander Pasternak

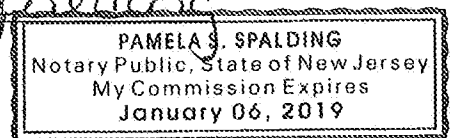
ACKNOWLEDGEMENT

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

On this 4th day of December, 2017, personally appeared before me **Alexander Pasternak** 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 4th day of December, 2017.

Wanying Sun
Wanying Sun

ACKNOWLEDGEMENT

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

On this 4th day of December, 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.

(Seal)

Pamela S. Spalding
Notary Public

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

Executed this _____ day of _____, 20____.

Haifeng Tang

ACKNOWLEDGEMENT

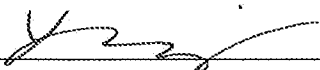
State of New Jersey)
) s.s.:
County of Middlesex)

On this _____ day of _____, 20____, personally appeared before me **Haifeng Tang** 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 14th day of November, 2017.

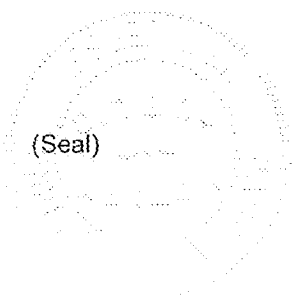


Yi Zang

ACKNOWLEDGEMENT

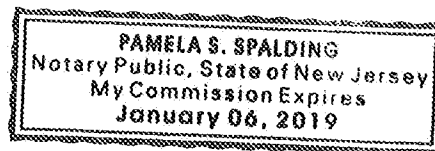
State of New Jersey)
) s.s.:
County of Union)

On this 14th day of November, 2017, personally appeared before me **Yi Zang** 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.





Notary Public



WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- | | |
|--|---|
| (1) Tesfaye Biftu, located at Freehold, NJ | (6) Alexander Pasternak, located at Princeton, NJ |
| (2) Xianhai Huang, located at Warren, NJ | (7) Wanying Sun, located at Edison, NJ |
| (3) Weiguo Liu, located at Princeton, NJ | (8) Haifeng Tang, located at Metuchen, NJ |
| (4) Weidong Pan, located at Hillsborough, NJ | (9) Yi Zang, located at Princeton, NJ |
| (5) Min Park, located at Whippany, 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:

CHROMANE MONOBACTAM COMPOUNDS FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):

U.S. Provisional Application No. 62/566,799 filed on 10/02/2017;

U.S. Application No. 16/651,456 having a filing date of 3/27/2020; and

PCT International Application No. PCT/US2018/053039 having a filing date of 9/27/2018.

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 1 day of December, 2017.

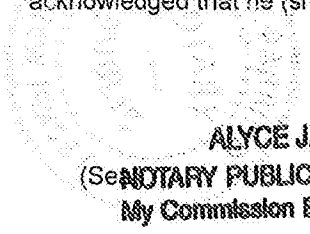


Tesfaye Biftu

ACKNOWLEDGEMENT

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

On this 1 day of December, 2017, personally appeared before me **Tesfaye Biftu** 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.


ALYCE J. PARRINO
(Seal) **NOTARY PUBLIC OF NEW JERSEY**
My Commission Expires July 1, 2021



Notary Public

Executed this _____ day of _____, 20____.

Xianhai Huang

ACKNOWLEDGEMENT

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

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____.

Weiguo Liu

ACKNOWLEDGEMENT

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

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

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Weidong Pan

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Weidong Pan** 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____.

Min Park

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Min Park** 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____.

Alexander Pasternak

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Alexander Pasternak** 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____.

Wanying Sun

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, 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.

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Haifeng Tang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Haifeng Tang** 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____.

Yi Zang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me Yi Zang 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) Tesfaye Biftu, located at Freehold, NJ | (6) Alexander Pasternak, located at Princeton, NJ |
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| (3) Weiguo Liu, located at Princeton, NJ | (8) Haifeng Tang, located at Metuchen, NJ |
| (4) Weidong Pan, located at Hillsborough, NJ | (9) Yi Zang, located at Princeton, NJ |
| (5) Min Park, located at Whippany, NJ | |

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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____.

Tesfaye Biftu

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Tesfaye Biftu** 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____.

Xianhai Huang

ACKNOWLEDGEMENT

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

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____.

Weiguo Liu

ACKNOWLEDGEMENT

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

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

(Seal)

Notary Public

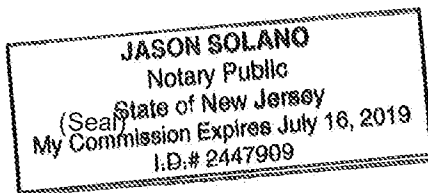
Executed this 15 day of November, 2017.

Weidong Pan
Weidong Pan

ACKNOWLEDGEMENT

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

On this 15 day of November, 2017, personally appeared before me **Weidong Pan** 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.



[Signature]
Notary Public

Executed this _____ day of _____, 20____.

Min Park

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Min Park** 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____.

Alexander Pasternak

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Alexander Pasternak** 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____.

Wanying Sun

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, 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.

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Haifeng Tang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Haifeng Tang** 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____.

Yi Zang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Yi Zang** 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) Tesfaye Biftu, located at Freehold, NJ | (6) Alexander Pasternak, located at Princeton, NJ |
| (2) Xianhai Huang, located at Warren, NJ | (7) Wanying Sun, located at Edison, NJ |
| (3) Weiguo Liu, located at Princeton, NJ | (8) Haifeng Tang, located at Metuchen, NJ |
| (4) Weidong Pan, located at Hillsborough, NJ | (9) Yi Zang, located at Princeton, NJ |
| (5) Min Park, located at Whippany, 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:

CHROMANE MONOBACTAM COMPOUNDS FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):

U.S. Provisional Application No. 62/566,799 filed on 10/02/2017;

U.S. Application No. 16/651,456 having a filing date of 3/27/2020; and

PCT International Application No. PCT/US2018/053039 having a filing date of 9/27/2018.

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____.

Tesfaye Biftu

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Tesfaye Biftu** 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____.

Xianhai Huang

ACKNOWLEDGEMENT

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

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____.

Weiguo Liu

ACKNOWLEDGEMENT

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

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

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Weidong Pan

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Weidong Pan** 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 18 day of November, 2017.

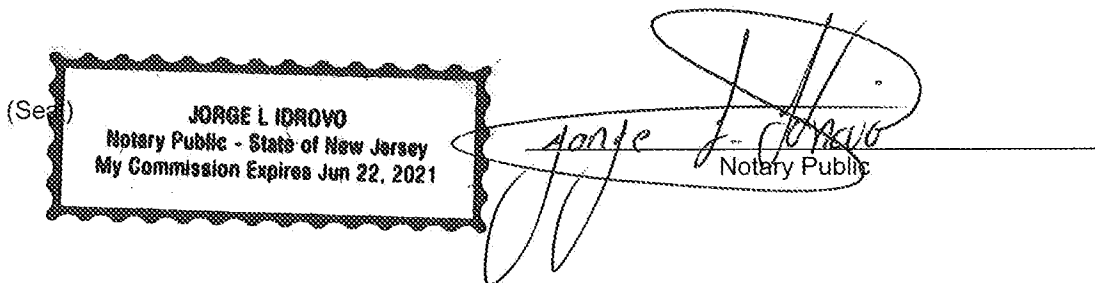


Min Park

ACKNOWLEDGEMENT

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

On this 18 day of November, 2017, personally appeared before me **Min Park** 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.



Executed this _____ day of _____, 20____.

Alexander Pasternak

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Alexander Pasternak** 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____.

Wanying Sun

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, 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.

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Haifeng Tang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Haifeng Tang** 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____.

Yi Zang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Yi Zang** 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) Tesfaye Biftu, located at Freehold, NJ | (6) Alexander Pasternak, located at Princeton, NJ |
| (2) Xianhai Huang, located at Warren, NJ | (7) Wanying Sun, located at Edison, NJ |
| (3) Weiguo Liu, located at Princeton, NJ | (8) Haifeng Tang, located at Metuchen, NJ |
| (4) Weidong Pan, located at Hillsborough, NJ | (9) Yi Zang, located at Princeton, NJ |
| (5) Min Park, located at Whippany, 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:

CHROMANE MONOBACTAM COMPOUNDS FOR THE TREATMENT OF BACTERIAL INFECTIONS

and/or in the following application(s):

U.S. Provisional Application No. 62/566,799 filed on 10/02/2017;

U.S. Application No. 16/651,456 having a filing date of 3/27/2020; and

PCT International Application No. PCT/US2018/053039 having a filing date of 9/27/2018.

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_____.

Tesfaye Biftu

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20_____, personally appeared before me **Tesfaye Biftu** 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_____.

Xianhai Huang

ACKNOWLEDGEMENT

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

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____.

Weiguo Liu

ACKNOWLEDGEMENT

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

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

(Seal)

Notary Public

Executed this _____ day of _____, 20____.

Weidong Pan

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Weidong Pan** 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_____.

Min Park

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20_____, personally appeared before me **Min Park** 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_____.

Alexander Pasternak

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20_____, personally appeared before me **Alexander Pasternak** 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____.

Wanying Sun

ACKNOWLEDGEMENT

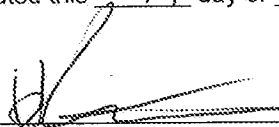
State of New Jersey)
) s.s.:
County of Union)

On this _____ day of _____, 20____, 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.

(Seal)

Notary Public

Executed this 17 day of November, 2017.

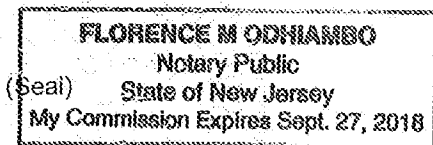


Haifeng Tang

ACKNOWLEDGEMENT

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

On this 17th day of November, 2017, personally appeared before me **Haifeng Tang** 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.



Florence M Odhiambo
Notary Public

Executed this _____ day of _____, 20____.

Yi Zang

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Yi Zang** 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