## 504672618 12/05/2017

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4719340

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

## **CONVEYING PARTY DATA**

| Name                 | Execution Date |
|----------------------|----------------|
| ASHLEY FORSTER       | 05/31/2016     |
| LEHUA CHANG          | 06/01/2016     |
| GREGORI J. MORRIELLO | 05/31/2016     |
| YILI CHEN            | 05/31/2016     |
| MICHAEL P. DWYER     | 05/31/2016     |
| ZACK ZHIQIANG GUO    | 05/31/2016     |
| MING WANG            | 05/31/2016     |

## **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: | 15579878 |

## **CORRESPONDENCE DATA**

Fax Number:

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:** 732-594-4909

**Email:** christine.kanellidis@merck.com

Correspondent Name: MERCK

Address Line 1: P O BOX 2000

Address Line 4: RAHWAY, NEW JERSEY 07065-0907

| ATTORNEY DOCKET NUMBER: | 24134-MSD              |
|-------------------------|------------------------|
| NAME OF SUBMITTER:      | CHRISTINE KANELLIDIS   |
| SIGNATURE:              | /christine kanellidis/ |

PATENT 504672618 REEL: 044304 FRAME: 0679

| DATE SIGNED:                           | 12/05/2017 |  |
|--|------------|--|
| Total Attachments: 6                   |            |  |
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| source=24134-ASN-MSDExecuted#page6.tif |            |  |

PATENT REEL: 044304 FRAME: 0680

### **WORLDWIDE ASSIGNMENT**

#### WHEREAS, IWE.

- (1) Gregori J. Morriello, located at Randolph, NJ,
- (2) Lehua Chang, located at Ramsey, NJ,
- (3) Ashley Forster, located at Harleysville, PA,
- (4) Yili Chen, located at Hillsborough, NJ,
- (5) Michael P. Dwyer, located at Scotch Plains, NJ,
- (6) Zack Zhiqiang Guo, located at Morganville, NJ
- (7) Ming Wang, located at Belle Mead, NJ

(hereinafter ASSIGNOR(S)), together with Shimin Xu, located at Beijing, China,

<u>Yingjian Bo, located at Beijing, China, Jianmin Fu, located at Beijing China,</u> and are the inventors of the invention described in an application for Patents having the Attorney Docket Number indicated above and the following Title of the Invention:

## SUBSTITUTED TRIAZOLO BICYCLIC COMPOUNDS AS PDE2 INHIBITORS

and in the following application(s):

| U.S. Provisional Application No.  | filed on       | ÷           |                  |               |
|-----------------------------------|----------------|-------------|------------------|---------------|
| U.S. Application No.              | having a       | filing date | of               | ; and         |
| PCT International Application No. | PCT/CN15/08306 | 60 havina   | a filing date of | July 1, 2015. |

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. Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

PATENT REEL: 044304 FRAME: 0681

| Executed this day of,   | 2016.  |
|---|--|
| Gregori J. Morriello  | Lehua Chang  |
| Yili Chen   | Michael P. Dwyer   |
| Zack Zhiqiang Guo   | Ming Wang  |
| ACKNOWLEDGEMENT   |  |
| of  | )<br>_) s.s.:  |
| On this day of<br>Chang, Yili Chen, Michael P. Dwyer, Zack Zi   | , 2016, personally appeared before me <b>Gregori J. Morriello, Lehua</b><br><b>niqiang Guo, Ming Wang</b> to me known, and known by me to be the same<br>pregoing instrument, and acknowledged that he (she) executed the same, of |
| (Seal)  |  |
|   | Notary Public  |
| Executed this 3 day of  | _ , 2016.  |
| ACKNOWLEDGEMENT   |  |
| COMMONWEALTH of PENNSYLVANIA)   | ) s.s.:  |
| County of_MONTGOMERY_   | )  |
| On this 3 day of Med known by me to be the same person described (she) executed the same, of his (her) own free   | , 2016, personally appeared before me <b>Ashley Forster</b> to me known, and in and who executed the foregoing instrument, and acknowledged that he will for the purpose set forth.  |
| (Seal)  COMMONWEALTH OF PENNSYLVANIA  Notarial Seal  Donothy M. Miller, Notary Public  Upper Gwynedd Twp., Montgomery County  Ny Commission Expires May 14, 2017  MEMBER, PENISYLVANIA ASSOCIATION OF NOTABLE | Notary Public States   |

Page 2 of 2

Computer Generated Template "Assignment-Merck Sharp & Dohme, Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

### **WORLDWIDE ASSIGNMENT**

### WHEREAS, IME,

- (1) Gregori J. Morriello, located at Randolph, NJ,
- (2) Lehua Chang, located at Ramsey, NJ,
- (3) Ashley Forster, located at Boyertown, PA,
- (4) Yili Chen, located at Hillsborough, NJ,
- (5) Michael P. Dwyer, located at Scotch Plains, NJ,
- (6) Zack Zhiqiang Guo, located at Morganville, NJ
- (7) Ming Wang, located at Belle Mead, NJ

(hereinafter ASSIGNOR(S)), together with Shimin Xu, located at Beijing, China,

<u>Yingjian Bo, located at Beijing, China, Jianmin Fu, located at Beijing China,</u> and are the inventors of the invention described in an application for Patents having the Attorney Docket Number indicated above and the following Title of the Invention:

### SUBSTITUTED TRIAZOLO BICYCLIC COMPOUNDS AS PDE2 INHIBITORS

and in the following application(s):

| U.S. Provisional Application No.  | filed on ;                              |                 |
|-----------------------------------|---|-----------------|
| U.S. Application No.              | having a filing date of                 | ; and           |
| PCT International Application No. | PCT/CN15/083060 having a filing date of | of July 1, 2015 |

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 Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

| Executed this 4 day of Jull   | , 2016.   | Les S   |
|---|---|---|
| Gragori d. Marriello  | ••  | Lehua Chang   |
| Y <del>ill Chert</del>  | in-   | Michael P. Dwyer  |
| Zaek Zhiqiang Guo   | -   | Wigg-Wang   |
| Chang, Yi <del>li Chen, Michael P. Dwyer, Zack Z</del> i  | hiqiang Guo, Mine<br>d the foregoing ins                      | ally appeared before me <b>Gregori J. Morriello, Lehua</b><br>n <del>g Wang</del> to me known, and known by me to be the<br>strument, and acknowledged that he (she) executed the |
| (Seal)  | Chu   | The M. Karrelledo   |
| Executed this day of  | , 2016.   | CHRISTINE M. KANELLIDIS Notary Public of New Jersey I.D. # 2442057 Commission Expires January 9, 2019   |
| Ashley Forster  | <b>50</b> 7   |   |
| ACKNOWLEDGEMENT   |   |   |
| COMMONWEALTH of PENNSYLVANIA)   | ,   |   |
| County of_MONTGOMERY_   | ) s.s.:<br>)  |   |
| On this day of<br>and known by me to be the same person desc<br>that he (she) executed the same, of his (her) o | , 2016, persona<br>ribed in and who e<br>wn free will for the | ally appeared before me <b>Ashley Forster</b> to me known, executed the foregoing instrument, and acknowledged purpose set forth.   |
| (Seal)  |   |   |
|   | ***************************************                       | Notary Public   |

**REEL: 044304 FRAME: 0684** 

### WORLDWIDE ASSIGNMENT

## WHEREAS, I/WE,

- (1) Gregori J. Morriello, located at Randolph, NJ,
- (2) Lehua Chang, located at Ramsey, NJ,
- (3) Ashley Forster, located at Harleysville, PA,
- (4) Yili Chen, located at Hillsborough, NJ,
- (5) Michael P. Dwyer, located at Scotch Plains, NJ,
- (6) Zack Zhiqiang Guo, located at Morganville, NJ
- (7) Ming Wang, located at Belle Mead, NJ

(hereinafter ASSIGNOR(S)), together with Shimin Xu, located at Beijing, China,

Yingjian Bo, located at Beijing, China, Jianmin Fu, located at Beijing China, and are the inventors of the invention described in an application for Patents having the Attorney Docket Number indicated above and the following Title of the Invention:

### SUBSTITUTED TRIAZOLO BICYCLIC COMPOUNDS AS PDE2 INHIBITORS

and in the following application(s):

| U.S. Provisional Application No.  | filed on ;                              |                 |
|-----------------------------------|---|-----------------|
| U.S. Application No.              | having a filing date of                 | ; and           |
| PCT International Application No. | PCT/CN15/083060 having a filing date of | of July 1, 2015 |

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.

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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, Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

| aut a  |   |  |  |
|--|---|--|--|
| Executed this 315 day of May   | , 2016.                                 |  |  |
| N/min  |   |  |  |
| Gregori J. Morriello   |   | Lehua Chang  |  |
| 452  |   | and  | well P. Dyna   |
| Yili Chen 10   |   | Michael P. Dwye  | er a   |
| 4  |   | 1111   |  |
| Zack Zhiqiang Vao  |   | Ming Wang  |  |
| ACKNOWLEDGEMENT  |   |  |  |
| State or Na. 1. Tenner   | ι <b>Λ</b> .                            |  |  |
| State or New Jersey country or Union   | ) s.s.:                                 |  |  |
| On this 3\s^day of May Chang, Yili Chen, Michael P. Dwyer, Zack Z same person(s) described in and who execute same, of his (her) own free will for the purpose | ed the foregoing i                      | onally appeared before<br>ling Wang to me know<br>instrument, and acknow | e me <b>Gregori J. Morriello, Łebua.</b> wn, and known by me to be the owledged that he (she) executed the     |
| (Seal)   | Chu                                     | Sline M. M. a. Notary Public   | relledis   |
| Executed this day of   | , 2016.                                 |  | CHRISTINE M. KANELLIDIS<br>Notary Public of New Jersey<br>I.D. # 2442057<br>Commission Expires January 9, 2019 |
| Ashley Forster   | пуна                                    |  |  |
| ACKNOWLEDGEMENT  |   |  |  |
| COMMONWEALTH of PENNSYLVANIA)  | \ e e :                                 |  |  |
| County of_MONTGOMERY_  | ) s.s.:<br>)                            |  |  |
| On this day of<br>and known by me to be the same person desc<br>that he (she) executed the same, of his (her) of   | cribed in and who                       | executed the forego  | e me <b>Ashley Forster</b> to me known,<br>ing instrument, and acknowledged                                    |
| (Seal)   |   |  |  |
|  | Anglistanteportunistaturatanapanipanipa | Notary Public  |  |

**REEL: 044304 FRAME: 0686**