

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4221685

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN Y L CHUNG	08/05/2014
KEVIN CAMPOS	08/05/2014
ROBERT F. DUNN	08/05/2014
ZHUQING LIU	08/05/2014
KEVIN M. MALONEY	08/05/2014
FENG XU	08/05/2014
NOBUYOSHI YASUDA	08/05/2014
YONG-LI ZHONG	08/05/2014
R. SCOTT HOERRNER	07/23/2014
EDWARD CLEATOR	06/03/2014
ANDREW GIBSON	06/03/2014
STEPHEN KEEN	06/06/2014
JOSEPH LYNCH	05/27/2014
NAOKI YOSHIKAWA	06/01/2014
DAVE LIEBERMAN	10/19/2014

RECEIVING PARTY DATA

Name:	MERCK SHARP & DOHME CORP.
Street Address:	126 E. LINCOLN AVENUE
City:	RAHWAY
State/Country:	NEW JERSEY
Postal Code:	07065

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15057427

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: 732-594-1652

Email: us_efs@merck.com
Correspondent Name: MERCK SHARP & DOHME CORP.
Address Line 1: 126 E. LINCOLN AVE.
Address Line 2: RY86-2011A
Address Line 4: RAHWAY, NEW JERSEY 07065

ATTORNEY DOCKET NUMBER: MRL-BRE-00015-US-CNT

NAME OF SUBMITTER: KATHLEEN A. REYNOLDS

SIGNATURE: /Kathleen A. Reynolds/

DATE SIGNED: 01/12/2017

Total Attachments: 96

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WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoernner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this 05 day of Aug, 2014.

John Y. L. Chung
John Y. L. Chung

ACKNOWLEDGEMENT


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

On this 5th day of August, 2014, personally appeared before me **John Y. L. Chung** 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)

Nancy E. Yorke
Notary Public
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442604
Commission Expires January 31, 2019

Executed this 5 day of Aug, 2014.



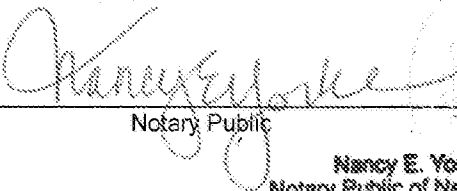
Kevin Campos

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me **Kevin Campos** 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
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442604
Commission Expires January 31, 2019

Executed this ____ day of _____, 20__.

Edward Cleator

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Edward Cleator** 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.

Witness

Executed this ____ day of _____, 20__.

Andrew Gibson

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Andrew Gibson** 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.

Witness

Executed this ____ day of _____, 20____.

Stephen Keen

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20____, personally appeared before me **Stephen Keen** 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.

Witness

Executed this ____ day of _____, 20__.

Dave Lieberman

Executed this ____ day of _____, 20__, personally appeared before me **David Lieberman** 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.

Witness

Executed this 5th day of August, 2014

Zhuqing Liu
Zhuqing Liu

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me **Zhuqing Liu** 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)

Nancy E. Yorke
Notary Public
Nancy E. Yorke
Notary Public of New Jersey
2442604
Commission Expires January 31, 2019
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442604
Commission Expires January 31, 2019

Executed this 5 day of August, 2014.

Kevin M. Maloney
Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me **Kevin M. Maloney** 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)

Nancy E. Yorke
Notary Public

Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442804
Commission Expires January 31, 2019

Executed this 5 day of August, 2014

[Signature]
Feng Xu

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me **Feng Xu** 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)

[Signature]
Notary Public
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442804
Commission Expires January 31, 2019

Executed this 5 day of Aug, 2014

Nobuyoshi Yasuda
Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me Nobuyoshi Yasuda 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)

Nancy E. Yorke
Notary Public
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442804
Commission Expires January 31, 2019

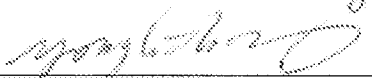
Executed this ____ day of _____, 20____.

Naoki Yoshikawa

Executed this ____ day of _____, 20____, personally appeared before me **Naoki Yoshikawa** 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.

Witness

Executed this 5th day of Aug, 2014.



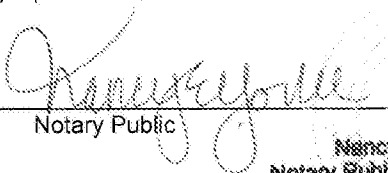
Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this 5th day of August, 2014, personally appeared before me **Yong-Li Zhong** 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
Nancy E. Yorks
Notary Public of New Jersey
I.D.# 2442804
Commission Expires January 31, 2019

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoerner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this ____ day of _____, 20__.

John Y. L. Chung

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **John Y. L. Chung** 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__.

Kevin Campos

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin Campos** 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__.

Edward Cleator

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Edward Cleator** 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.

Witness

Executed this ____ day of _____, 20__.

Robert F. Dunn

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Robert F. Dunn** 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__.

Andrew Gibson

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Andrew Gibson** 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.

Witness

Executed this 23 day of July, 2014

R. Scott Hoerrner

R. Scott Hoerrner

ACKNOWLEDGEMENT

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

On this 23 day of July, 2014, personally appeared before me R. Scott Hoerrner 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)

Dianne M. Faith
Notary Public

DIANNE M. FAITH
ID # 2278734
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 9/5/2016

Executed this ____ day of _____, 20__.

Stephen Keen

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Stephen Keen** 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.

Witness

Executed this ____ day of _____, 20__.

Dave Lieberman

Executed this ____ day of _____, 20__, personally appeared before me **David Lieberman** 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.

Witness

Executed this ____ day of _____, 20____.

Zhuqing Liu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Zhuqing Liu** 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__.

Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin M. Maloney** 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__.

Feng Xu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Feng Xu** 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__.

Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Nobuyoshi Yasuda** 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____.

Naoki Yoshikawa

Executed this ____ day of _____, 20____, personally appeared before me **Naoki Yoshikawa** 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.

Witness

Executed this ____ day of _____, 20____.

Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Yong-Li Zhong** 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoerner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this ____ day of _____, 20____.

John Y. L. Chung

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **John Y. L. Chung** 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__.

Kevin Campos

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin Campos** 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 3 day of June, 2014



Edward Cleator

ACKNOWLEDGEMENT

Executed this 3rd day of June, 2014 personally appeared before me **Edward Cleator** 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.



Witness

Executed this 03 day of June, 2014.

Andrew Gibson

Andrew Gibson

ACKNOWLEDGEMENT

Executed this 3rd day of June, 2014 personally appeared before me **Andrew Gibson** 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.



Witness

Executed this 6th day of JUNE, 2016.

Stephen Keen
Stephen Keen

ACKNOWLEDGEMENT

Executed this 6 day of June, 2016 personally appeared before me **Stephen Keen** 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]
Witness

Executed this ____ day of _____, 20____.

Dave Lieberman

Executed this ____ day of _____, 20____, personally appeared before me David Lieberman 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.

Witness

Executed this ____ day of _____, 20____.

Zhuqing Liu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Zhuqing Liu** 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____.

Joseph Lynch

ACKNOWLEDGEMENT

Commonwealth of Pennsylvania)
) s.s.:
County of Montgomery7)

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

Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Kevin M. Maloney** 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__.

Feng Xu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Feng Xu** 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__.

Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Nobuyoshi Yasuda** 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__.

Naoki Yoshikawa

Executed this ____ day of _____, 20__, personally appeared before me **Naoki Yoshikawa** 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.

Witness

Executed this ____ day of _____, 20__.

Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Yong-Li Zhong** 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoerrner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this ____ day of _____, 20__.

John Y. L. Chung

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **John Y. L. Chung** 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__.

Kevin Campos

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin Campos** 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____.

Edward Cleator

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20____, personally appeared before me **Edward Cleator** 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.

Witness

Executed this ____ day of _____, 20__.

Robert F. Dunn

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Robert F. Dunn** 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____.

Andrew Gibson

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20____, personally appeared before me **Andrew Gibson** 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.

Witness

Executed this ____ day of _____, 20__.

R. Scott Hoerrner

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **R. Scott Hoerrner** 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__.

Stephen Keen

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Stephen Keen** 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.

Witness

Executed this ____ day of _____, 20__.

Dave Lieberman

Executed this ____ day of _____, 20__, personally appeared before me **David Lieberman** 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.

Witness

Executed this ____ day of _____, 20____.

Zhuqing Liu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Zhuqing Liu** 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 27 day of May, 2014.

Joseph Lynch
Joseph Lynch

ACKNOWLEDGEMENT

Commonwealth of Pennsylvania)
County of Montgomery7) s.s.:

On this 27th day of May, 2014, personally appeared before me **Joseph Lynch** 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)

Nancy E. Yorke
Notary Public
Nancy E. Yorke
Notary Public of New Jersey
I.D.# 2442604
Commission Expires January 31, 2018



Executed this ____ day of _____, 20__.

Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin M. Maloney** 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__.

Feng Xu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Feng Xu** 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__.

Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Nobuyoshi Yasuda** 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__.

Naoki Yoshikawa

Executed this ____ day of _____, 20__, personally appeared before me **Naoki Yoshikawa** 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.

Witness

Executed this ____ day of _____, 20__.

Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Yong-Li Zhong** 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoerrner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this ____ day of _____, 20__.

John Y. L. Chung

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **John Y. L. Chung** 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__.

Kevin Campos

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin Campos** 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____.

Edward Cleator

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20____, personally appeared before me **Edward Cleator** 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.

Witness

Executed this ____ day of _____, 20__.

Robert F. Dunn

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Robert F. Dunn** 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__.

Andrew Gibson

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Andrew Gibson** 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.

Witness

Executed this ____ day of _____, 20____.

R. Scott Hoerrner

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **R. Scott Hoerrner** 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__.

Stephen Keen

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Stephen Keen** 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.

Witness

Executed this ____ day of _____, 20____.

Dave Lieberman

Executed this ____ day of _____, 20____, personally appeared before me **David Lieberman** 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.

Witness

Executed this ____ day of _____, 20__.

Zhuqing Liu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Zhuqing Liu** 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__.

Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this _____ day of _____, 20____, personally appeared before me **Kevin M. Maloney** 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__.

Feng Xu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Feng Xu** 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__.

Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Nobuyoshi Yasuda** 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 1st day of June, 2014.

Naoki Yoshikawa
Naoki Yoshikawa

Executed this 3rd day of June, 2014, personally appeared before me Naoki Yoshikawa 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.

Naoki Yoshikawa
Witness

Executed this ____ day of _____, 20____.

Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Yong-Li Zhong** 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

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) John Y. L. Chung, located at Edison, NJ,
- (2) Kevin Campos, located at Berkeley Heights, NJ,
- (3) Edward Cleator, located at Cambridge, United Kingdom,
- (4) Robert F. Dunn, located at Towaco, NJ,
- (5) Andrew Gibson, located at Hoddesdon, United Kingdom,
- (6) R. Scott Hoerner, located at Westfield, NJ,
- (7) Stephen Keen, located at Hoddesdon, United Kingdom,
- (8) Dave Lieberman, located at Hoddesdon, United Kingdom,
- (9) Zhuqing Liu, located at Edison, NJ,
- (10) Joseph Lynch, located at Plainfield, NJ,
- (11) Kevin M. Maloney, located at Piscataway, NJ,
- (12) Feng Xu, located at Staten Island, NY,
- (13) Nobuyoshi Yasuda, located at Mountainside, NJ,
- (14) Naoki Yoshikawa, located at Hyogo, JAPAN,
- (15) Yong-Li Zhong, 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:

PROCESS FOR MAKING BETA 3 ANAGONISTS AND INTERMEDIATES

and/or in the following application(s):

U.S. Provisional Application No. 61/552,195 filed on 10/27/2011;
U.S. Application No. _____ having a filing date of _____; and
PCT International Application No. _____ having a filing date of _____.

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that I/we have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter **ASSIGNEE**), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/we, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said **ASSIGNEE** my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of **ASSIGNEE**, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said **ASSIGNEE**, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of **ASSIGNEE**, without further compensation or charge to said **ASSIGNEE**, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of **ASSIGNEE**, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize **ASSIGNEE** to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.

Executed this ____ day of _____, 20__.

John Y. L. Chung

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **John Y. L. Chung** 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__.

Kevin Campos

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Kevin Campos** 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__.

Edward Cleator

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Edward Cleator** 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.

Witness

Executed this ____ day of _____, 20__.

Robert F. Dunn

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Robert F. Dunn** 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__.

Andrew Gibson

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Andrew Gibson** 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.

Witness

Executed this ____ day of _____, 20__.

R. Scott Hoerrner

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **R. Scott Hoerrner** 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__.

Stephen Keen

ACKNOWLEDGEMENT

Executed this ____ day of _____, 20__, personally appeared before me **Stephen Keen** 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.

Witness

Executed this 19 day of OCTOBER, 2014.

David Lieberman
Dave Lieberman

Executed this 19th day of OCTOBER, 2014, personally appeared before me **David Lieberman** 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.

Ricky Pereira
Witness

Executed this ____ day of _____, 20__.

Zhuqing Liu

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Zhuqing Liu** 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____.

Kevin M. Maloney

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20____, personally appeared before me **Kevin M. Maloney** 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__.

Nobuyoshi Yasuda

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Nobuyoshi Yasuda** 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__.

Naoki Yoshikawa

Executed this ____ day of _____, 20__, personally appeared before me **Naoki Yoshikawa** 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.

Witness

Executed this ____ day of _____, 20__.

Yong-Li Zhong

ACKNOWLEDGEMENT

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

On this ____ day of _____, 20__, personally appeared before me **Yong-Li Zhong** 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