505641193 08/27/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5687999

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALLISON D. ORTIGOSA	03/03/2015
MICHAEL P. COLEMAN	03/09/2015
SHIBU T. GEORGE	03/03/2015
MICHAEL A. RAUSCHER	02/26/2015
MARK C. SLEEVI	03/03/2015
KARTOA CHOW	03/05/2015

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16551974

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: 732-594-6914

US-DOCKET-PATENT@merck.com Email:

Correspondent Name: MERCK P O BOX 2000 Address Line 1:

Address Line 2: RY86-2011A

Address Line 4: RAHWAY, NEW JERSEY 07065-0907

ATTORNEY DOCKET NUMBER:	23742
NAME OF SUBMITTER:	JOHN DAVID REILLY
SIGNATURE:	/John David Reilly, Reg. #43039/
DATE SIGNED:	08/27/2019

PATENT REEL: 050179 FRAME: 0135 505641193

Total Attachments: 21 source=23742-ASSIGN-27AUG2019#page1.tif source=23742-ASSIGN-27AUG2019#page2.tif source=23742-ASSIGN-27AUG2019#page3.tif source=23742-ASSIGN-27AUG2019#page4.tif source=23742-ASSIGN-27AUG2019#page5.tif source=23742-ASSIGN-27AUG2019#page6.tif source=23742-ASSIGN-27AUG2019#page7.tif source=23742-ASSIGN-27AUG2019#page8.tif source=23742-ASSIGN-27AUG2019#page9.tif source=23742-ASSIGN-27AUG2019#page10.tif source=23742-ASSIGN-27AUG2019#page11.tif source=23742-ASSIGN-27AUG2019#page12.tif source=23742-ASSIGN-27AUG2019#page13.tif source=23742-ASSIGN-27AUG2019#page14.tif source=23742-ASSIGN-27AUG2019#page15.tif source=23742-ASSIGN-27AUG2019#page16.tif source=23742-ASSIGN-27AUG2019#page17.tif source=23742-ASSIGN-27AUG2019#page18.tif source=23742-ASSIGN-27AUG2019#page19.tif source=23742-ASSIGN-27AUG2019#page20.tif source=23742-ASSIGN-27AUG2019#page21.tif

PATENT REEL: 050179 FRAME: 0136

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

(1)	Allison D. Ortigosa	located at	Elkton, VA	22827
(2)	Michael P. Coleman,	located at	Louisville, CO	80027
(3)	Shibu T. George	located at	Thornton, CO	80602
(4)	Michael A. Rauscher,	located at	Garwood, NJ	07027
(5)	Mark C. Sleevi ,	located at	Longmont, CO	80503
(6)	Kartoa Chow ,	located at	San Francisco, CA	94102

(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:

PURIFYING INSULIN USING CATION EXCHANGE AND REVERSE PHASE CHROMATOGRAPHY IN THE PRESENCE OF AN ORGANIC MODIFIER AND ELEVATED TEMPERATURE

and in the following application(s):

U.S. Provisional Application No. <u>61/953.001</u> filed on <u>03/14/2014</u>;
U.S. Application No. <u>15/124.080</u> having a filing date of <u>9/7/2016</u>; and

PCT International Application No. PCT/US15/19864, having a filing date of 3/11/2015

WHEREAS I/WE coverant 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.

IAVE 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 Blank Single Assignme Worldwide" (Assignment) Merck Shera & Dohms Corp. 07/09/2010

Worldwide Assignment	Attorney Docket No.	23472 737U
		- XI 17°
Executed this <u>03</u> day of <u>MAYCA</u>	. 2015	í.
alsot	· · · · · · · · · · · · · · · · · · ·	
ALLISON D. ORTIĞOSAW		
ACKNOWLEDGEMENT		
Stakeor_Virginia		
County of Rangham) s.s.;)	
On this 30 day of (1) was me known and known by me to be the same pe	, 20 \(\sum_{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tikitext{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texitex{\text{\text{\text{\texi}}\text{\text{\text{\texi}\text{\text{\texi}}}\text{\text{\text{\text{\text{\text{\texit{\text{\text{\tex{	GOSA to ;, and
(Seal)	Many Lynn Shall Will Wille World Public Will Public Wi	
Executed this day of	, 20	
MICHAEL P. COLEMAN		
Mid Irac , , damini.		
ACKNOWLEDGEMENT	is the second of	
County of		
me known, and known by me to be the same p	, 20, personally appeared before me MICHAEL P. COL berson described in and who executed the foregoing instrumen e, of his (her) own free will for the purpose set forth.	EMAN to t, and
(Seal)		
	Notary Public	

Page 2 of 4 Computer Generated Template "Assignment-Blank Single Assigned Worldwide" (Assignment) Merck Sharp & Dohme Corp., 07/09/2010

Worldwide Assignment	Attorney Docket No. 2341
Executed this day of	, 20
ALLISON D. ORTIGOSA	
ACKNOWLEDGEMENT	
	<u></u>)
County of) s.s.: }
On this day of me known, and known by me to be the same pe	20, personally appeared before me ALLISON D. ORTIGOSA to erson described in and who executed the foregoing instrument, and to this (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this 💯 day of <u>March</u>	, 20 <u>/4</u>
WICHAEL P. COLEMAN	
wichael P. Coleman	
ACKNOWLEDGEMENT	
	ì
State or Colorado County of Boulder	, s.s.; }
on this 9th day or March	. 2015, personally appeared before me MICHAEL P. COLEMAN to reson described in and who executed the foregoing instrument, and
ne known, and known by me to be the same be acknowledged that he (she) executed the same.	rson described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	Mi Chelle RICE
XXX 8 3.23 XX	Notary Public
NOTARY PUBLIC	
\$147E OF COLO7400 NOTABY 10 20114074198	
117 COMMISSION EXPINES JAMMARY 88, 2016	

On this _____ day of _____, 20___, personally appeared before me MICHAEL A. RAUSCHER to me known, and known by me to be the same person described in and who executed the foregoing instrument, and

Notary Public

acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

Page 3 of 4		
Computer Generated Template "Assignment-Blank Single Assignee Worldwide"	(Assignment) Merck Sharp & Dohme Corp.	07/09/2010

ACKNOWLEDGEMENT

County of____

(Seal)

On this _____day of _____, 20____, personally appeared before me KARTOA CHOW to me known, and known by me to be the same person described in and who executed the foregoing instrument, and

Notary Public

acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

Page 4 of 4
Computer Generated Template "Assignment-Blank Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

ACKNOWLEDGEMENT

County of_____

(Seal)

Attorney Docket No.: 234/2
WORLDWIDE ASSIGNMENT 13747

WHEREAS, I/WE,

(1)	Allison D. Ortigosa	located at	Elkton, VA	22827 .
(2)	Michael P. Coleman ,	located at	Louisville, CO	80027 .
(3)	Shibu T. George	located at	Thornton, CO	80602 ,
(4)	Michael A. Rauscher,	located at	Garwood, NJ	07027
(5)	Mark C. Sleevi	located at	Longmont, CO	80503
(6)	Kartoa Chow	located at	San Francisco, CA	94102 .

(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:

PURIFYING INSULIN USING CATION EXCHANGE AND REVERSE PHASE CHROMATOGRAPHY IN THE PRESENCE OF AN ORGANIC MODIFIER AND ELEVATED TEMPERATURE

and in the following application(s):

U.S. Provisional Application No. <u>61/953,001</u> filed on <u>03/14/2014;</u>
U.S. Application No. <u>15/124,080</u> having a filing date of <u>9/7/2016</u>; and PCT International Application No. <u>PCT/US15/19864</u> having a filing date of <u>3/11/2015</u>.

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 filled on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of sald 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 paths 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 Temptate "Assignment-Blank Single Assignes Worldwide" (Assignment) Merck Sharp & Dohma Corp. 07/09/2010

Worldwide Assignment	Attorney Docket No. 23472
	2379-
Executed this day of	, 20
ALLISON D. ORTIGOSA	· ·
ACKNOWLEDGEMENT	
of)
of) s.s.:)
On this day of me known, and known by me to be the sar	, 20, personally appeared before me ALLISON D. ORTIGOSA to ne person described in and who executed the foregoing instrument, and same, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this day of	, 20
MICHAEL P. COLEMAN	
ACKNOWLEDGEMENT	
of	
of County of) s.s.:)
me known, and known by me to be the sam	, 20, personally appeared before me MICHAEL P. COLEMAN to be person described in and who executed the foregoing instrument, and ame, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public

Page 2 of 4 Computer Generated Template "Assignment-Blank Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

Executed this <u>Q3</u> day of <u>M&C</u>	<u>b, 2015</u>
WWW.	
SHIBUT, GEORGE	
ACKNOWLEDGEMENT	
State or Coloreu	<u>ta</u>)
State or Coloreus) s.s.;)
On this 300 day of MAC	, 20 S personally appeared before me SHIBUT, GEORGE to me ne person described in and who executed the foregoing instrument, and he same, of his (her) own free will for the purpose set forth.
(SESSIE VINCENT	I have himset
NOTARY PUBLIC	Notary Public
STATE OF COLORADO	V
NOTARY ID 20144010151	
	7t)
OMMISSION EXPIRES MARCH 5, 2011	
OMMISSION EXPIRES MARCH 6, 2011	
OMMISSION EXPIRES MAHCH 5, 2011 Executed thisday of	
OMMISSION EXPIRES MARCH 8, 2011	
OMMISSION EXPIRES MARCH 5, 2011 Executed this day of	
Executed thisday of MICHAEL A. RAUSCHER ACKNOWLEDGEMENT	. 20
Executed thisday of MICHAEL A. RAUSCHER ACKNOWLEDGEMENT	. 20
Executed thisday of MICHAEL A. RAUSCHER ACKNOWLEDGEMENT of County of	. 20

Notary Public

Worldwide Assignment

(Seal)

Page 3 of 4 Computer Generated "Assignment-Blank Single Assigner Worldeide" (Assignment) Merck Sharp & Dolmo Gorp. 07/09/2010

Attorney Docket No. 23472

Worldwide Assignment	Attorney Docket No. 23472
Executed this day of	, 20
MARK C. SLEEVI	
ACKNOWLEDGEMENT	
of)) s.s.:
County of)
On this day of known, and known by me to be the same acknowledged that he (she) executed the	, 20, personally appeared before me MARK C. SLEEVI to me person described in and who executed the foregoing instrument, and same, of his (her) own free will for the purpose set forth.
(Seal)	· ·
	Notary Public
Executed this day of	, 20
KARTOA CHOW	
ACKNOWLEDGEMENT	
of) \$ 5 .
of)
On this day of known, and known by me to be the same acknowledged that he (she) executed the	, 20, personally appeared before me KARTOA CHOW to me e person described in and who executed the foregoing instrument, and e same, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public

Page 4 of 4 Computer Generated Template "Assignment-Blank Single Assignee Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

Attorney Docket No.: 23472
WORLDWIDE ASSIGNMENT

WHEREAS, IWE,

(1)	Allison D. Ortigosa	located at	Elkton, VA	22827
(2)	Michael P. Coleman ,	located at	Louisville, CO	80027
(3)	Shibu T. George ,	located at	Thornton, CO	80602
(4)	Michael A. Rauscher,	located at	Garwood, NJ	07027 .
(5)	Mark C. Sleevi ,	located at	Longmont, CO	80503
(6)	Kertos Chow	located at	San Francisco, CA	94102

(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:

PURIFYING INSULIN USING CATION EXCHANGE AND REVERSE PHASE CHROMATOGRAPHY IN THE PRESENCE OF AN ORGANIC MODIFIER AND ELEVATED TEMPERATURE

and in the following application(s):

U.S. Provisional Application No. 61/953.001 filed on 03/14/2014;
U.S. Application No. 15/124,080 having a filing date of 9/7/2016; and PCT International Application No. PCT/US15/19864 having a filing date of 3/11/2015.

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, liwe, 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 alding 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-Blank Single Assignes Worldwide" (Assignment) Merck Share & Dohne Corp. 07/08/2010

Worldwide Assignment	Attorney Docket No. 23472
Executed this day of	., 20
ALLISON D. ORTIGOSA	· · · · · · · · · · · · · · · · · · ·
ACKNOWLEDGEMENT	
County of) s.s.;)
On this day of me known, and known by me to be the same pe acknowledged that he (she) executed the same,	, 20, personally appeared before me ALLISON D. ORTIGOSA to rson described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this day of	, 20
MICHAEL P. COLEMAN	·
ACKNOWLEDGEMENT	
County of)) s.s.:
tie known, and known by me to be the same per	, 20, personally appeared before me MICHAEL P. COLEMAN to son described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	

Notary Public

Page 2 of 4 Computer Generated Template "Assignment-Blank Single Assignee Worldwide" (Assignment) Merck Sharp & Dohnie Corp. 07/09/2010

On this day of d

DAWN A. SCOTT NOTARY PUBLIC OF NEW JERSEY I.D. # 2370572 Sy Commission Expires 25/2016

County of

(Seal)

Worldwide Assignment	Attorney Docket No. 234
Executed thisday of	, 20
MARK C. SLEEVI	
ACKNOWLEDGEMENT	
of)
County of) s.s.:)
On this day of known, and known by me to be the same person	, 20, personally appeared before me MARK C. SLEEVI to me on described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this day of	
KARTOA CHOW	
ACKNOWLEDGEMENT	
of County of) s.s.;)
arowal and known by the to be the same beiso	, 20, personally appeared before me KARTOA CHOW to me n described in and who executed the foregoing instrument, and , of his (her) own free will for the purpose set forth.
(Seal)	A Complete the complete to the
	Notary Public

Page 4 of 4 Computer Generated Template "Assignment-Blank Striple Assignme Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

Attorney Docket No.: 2347
WORLDWIDE ASSIGNMENT

WHEREAS, IAVE,

(1)	Allison D. Ortigosa,	located at	Elkton, VA	22827
(2)	Michael P. Coleman ,	located at	Louisville, CO	80027
(3)	Shibu T. George	located at	Thornton, CO	80602
(4)	Michael A. Rauscher	located at	Garwood, NJ	07027
(5)	Mark C. Sleevi	located at	Longmont, CO	80503
(6)	Kartoa Chow	located at	San Francisco, CA	94102

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and in the following application(s):

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WHEREAS I/WE covenant that the rights and properly 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 International arrangement 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 saie 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 Generaled Template "Assignment-Blank Single Assignes-Worldwide" (Assignment) Merck Sharp & Online Corp. 07/09/2010

Worldwide Assignment	Attorney Docket No. 23472 23742
Executed this day of	, 20
ALLISON D. ORTIGOSA	
ACKNOWLEDGEMENT	
County of)) s.s.:)
me known, and known by me to be the same per	, 20, personally appeared before me ALLISON D. ORTIGOSA to reson described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	* *
	Notary Public
Executed this day of	. 20
WICHAEL P. COLEMAN	
ACKNOWLEDGEMENT	
of)	
County of	. S.S.:
On this day of ne known, and known by me to be the same per cknowledged that he (she) executed the same, or	, 20, personally appeared before me MICHAEL P. COLEMAN to son described in and who executed the foregoing instrument, and of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public *

Page 2 of 4
Computer Generated Template "Assignment-Blank Single Assignme Worldwide" (Assignment) Merck Sherp & Duhme Corp. 07/09/2010

Worldwide Assignment		Attorney Docket No. 23472 / 23 743	94
Executed this day of	., 20	ŕ	
SHIBUT. GEORGE			
ACKNOWLEDGEMENT			
who will and who will by the to be the same person	, 20 personally appeared before m	contrar instrument and	
acknowledged that he (she) executed the same (Seal)	of his (her) own free will for the purpose	set forth.	
	Notary Public	Problemine equipment	
Executed this day of	, 20		
MICHAEL A. RAUSCHER			
ACKNOWLEDGEMENT			
of) 3 ,8.7		
On this day of me known, and known by me to be the same per acknowledged that he (she) executed the same,	, 20, personally appeared before me son described in and who executed the fo of his (her) own free will for the purpose s	Scoresing inclusional and	
(Seal)	The state of the s		
	Notary Public		

Page 3 of 4
Computer Generaled Template "Assignment-Blank Single Assigner Worldwide" (Assignment Merck Sherp & Dohne Corp. 07/09/2010

	Worldwide Assignment	Attorney Docket No. 23	1472 37
	Executed this 3_day of	76	• ,
	MARK C. SLEEVI CSCLC4,"		
	ACKNOWLEDGEMENT of COLOROW S.s.: County of Or	ne MARK C. SLEEVI to m agoing instrument, and	10
/ CC	(SESSIE VINCENT NOTARY PUBLIC STATE OF COLORADO NOTARY ID 20144010151 DMMISSION EXPIRES MARCH 5, 2018	e set forth.	
	Executed this day of, 20 KARTOA CHOW		
	ACKNOWLEDGEMENT		
1	On thisday of, 20 personally appeared before m known, and known by me to be the same person described in and who executed the fore acknowledged that he (she) executed the same, of his (her) own free will for the purpose	E KARTOA CHOW to me going instrument, and set forth.	
	(Seal)		

Notary Public

Page 4 of 4
Computer Generated Template "Assignment-Blank Single Assignee Wolldwide" (Assignment) Menck Sherp & Dohme Corp. 07/09/2010

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE,

- (1) Allison D. Ortigosa, located at Harrisonburg, VA,
- (2) Michael P. Coleman, located at Boulder, CO,
- (3) Shibu T. George, located at Thornton, CO,
- (4) Michael A. Rauscher, located at Garwood, NJ,
- (5) Mark C. Sleevi, located at Boulder, CO,
- (6) Kartoa Chow, located at San Francisco, CA

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:

PURIFYING INSULIN USING CATION EXCHANGE AND REVERSE PHASE CHROMATOGRAPHY IN THE PRESENCE OF AN ORGANIC MODIFIER AND ELEVATED TEMPERATURE

and in the following application(s):

U.S. Provisional Application No.61/953,001 filed on March 14, 2014;

U.S. Application No. <u>15/124.080</u> having a filing date of <u>9/7/2016</u>; and PCT International Application No. <u>PCT/US15/19864</u> having a filing date of <u>3/11/2015</u>

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 aforesald 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
Allison D. Ortigosa	
ACKNOWLEDGEMENT	,
of)) s.s.:
County of	j ,
On this day of known, and known by me to be the same pers acknowledged that he (she) executed the sam	, 20, personally appeared before me Allison D. Ortigosa to me on(s) described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this day of	, 20
Michael P. Coleman	
ACKNOWLEDGEMENT	
County of)) s.s.:)
known, and known by me to be the same pers	, 20, personally appeared before me Michael P. Coleman to me on(s) described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public

Page 2 of 4
Computer Generated Template "Assignment-Merck Sharp & Dohme. Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

Executed this day of ,	20
Shibu T. George	
ACKNOWLEDGEMENT	
County of	_)) s.s.:)
known, and known by me to be the same perso	, 20, personally appeared before me Shibu T. George to me n(s) described in and who executed the foregoing instrument, and e, of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public
Executed this day of ,	20
Michael A. Rauscher	
ACKNOWLEDGEMENT	
of	_)) s.s.:)
On this day of known, and known by me to be the same perso acknowledged that he (she) executed the same	_ , 20, personally appeared before me Michael A. Rauscher to me n(s) described in and who executed the foregoing instrument, and , of his (her) own free will for the purpose set forth.
(Seal)	
	Notary Public

Page 3 of 4
Computer Generated Template "Assignment-Merck Sharp & Dohme. Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010

Executed this c	day of	_ , 20
Mark C. Sleevi		·
ACKNOWLEDGEM	ENT .	
County of	of)) s.s.:)
On this and known by me to that he (she) execute	day of be the same person(s) d ed the same, of his (her)	, 20, personally appeared before me Mark C. Sleevi to me known, described in and who executed the foregoing instrument, and acknowledged own free will for the purpose set forth.
(Seal)		Notary Public
Executed this 5th d	ay of MARCH	_ , 20]5 .
On this 5^{\sharp} and known by me to i	of CAlifornia Mateo day of MARCH be the same person(s) do) s.s.:) s.s.:) personally appeared before me Kartoa Chow to me known, lescribed in and who executed the foregoing instrument, and acknowledged own free will for the purpose set forth.
(Seal)	SE N.	How Yesa Notary Public
	Commi Notary San	ORI JEPSEN ission # 2040758 Public - California 1 Mateo County 1- Expires Oct 2, 2017

Page 4 of 4
Computer Generated Template "Assignment-Merck Sharp & Dohme, Multiple Assignees Worldwide" (Assignment) Merck Sharp & Dohme Corp. 07/09/2010