505596586 07/30/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5643387

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
XIAO DING	05/19/2015
QIAN LIU	04/16/2015
YINGXIA SANG	04/16/2015
LUIGI PIERO STASI	09/07/2015
ZEHONG WAN	04/16/2015
BAOWEI ZHAO	04/16/2015
COLIN MICHAEL EDGE	04/15/2015

## **RECEIVING PARTY DATA**

Name:	GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED
Street Address:	980 GREAT WEST ROAD
City:	BRENTFORD, MIDDLESEX
State/Country:	UNITED KINGDOM
Postal Code:	TW8 9GS

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16052791

## **CORRESPONDENCE DATA**

**Fax Number:** (610)917-6934

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:** 610-917-6187

Email: US\_CIPKOP@GSK.com
Correspondent Name: GLAXOSMITHKLINE

Address Line 1: 1250 SOUTH COLLEGEVILLE ROAD

Address Line 2: GLOBAL PATENTS - UP4110

Address Line 4: COLLEGEVILLE, PENNSYLVANIA 19426

ATTORNEY DOCKET NUMBER:	PC65588C1
NAME OF SUBMITTER:	SUVIAN NESMITH
SIGNATURE:	/Suvian Nesmith/

PATENT 505596586 REEL: 049910 FRAME: 0987

DATE SIGNED:	07/30/2019		
Total Attachments: 11			
source=PC65588 WO WW Assignment#	tpage1.tif		
source=PC65588 WO WW Assignment#page2.tif			
source=PC65588 WO WW Assignment#page3.tif			
source=PC65588 WO WW Assignment#page4.tif			
source=PC65588 WO WW Assignment#page5.tif			
source=PC65588 WO WW Assignment#page6.tif			
source=PC65588 WO WW Assignment#page7.tif			
source=PC65588 WO WW Assignment#page8.tif			
source=PC65588 WO WW Assignment#page9.tif			
source=PC65588 WO WW Assignment#page10.tif			
source=PC65588 WO WW Assignment#page11.tif			

ASSIGNMENT

WHEREAS I/WE, Xiao DING; Qian Liu; Yingxia SANG; Zehong WAN and Baowei ZHAO all citizens of China and Liugi Piero STASI a citizen of Italy, all of Pudong, Shanghai, China (hereinafter called "the inventor(s)") have invented or discovered certain improvements in "Compounds" (hereinafter referred to as "the invention and improvements") for which priority application PCT/CN2014/000139 was filed on 29 Jan 2014 in the Patent Cooperation Treaty, and for which a PCT international application PCT/CN2015/000065 was filed on 28 Jan 2015, designating the United States of America.

WHEREAS the invention, being made in the course of my employment, belongs to my/our employer at that time, namely GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED a company incorporated in China whose registered address is Building 3, 898 Halei Road Zhangjiang Hi-tech Park, Pudong, Shanghai 201203, China, and

WHEREAS GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED has authorised and requested our making the application, and

WHEREAS GLAXO WELLCOME MANUFACTURING PTE LTD, a company organised and existing under the laws of Singapore and having its registered office at 1 Pioneer Sector 1, Jurong, Singapore 68413 has acquired from GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED the rights in the invention by virtue of an agreement dated 1 April 2008.

WHEREAS GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from GLAXO WELLCOME MANUFACTURING PTE LTD the whole right, title and interest in and to the invention and in and to the application, and

WHEREAS GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and in and to any applications for the invention and any Letters Patent to be obtained therefor, in all countries, including the United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern be it known that I/we, the inventor(s), hereby confirm the ownership by GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED of the invention and the application by operation of law and, if under the law of the United States of America I/we the inventor(s) have any ownership right, title and interest in and to the invention and the application, (which I/we do not believe to be the case and claim no ownership right, title or interest in and to the invention and to the application based on the law of China), I/we the inventor(s) nevertheless hereby assign and transfer such ownership right, title and

interest in and to the invention and to the application, including the right to claim priority from the application in respect of any subsequent applications, to GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED.

GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED in turn hereby assigns and transfers to GLAXO WELLCOME MANUFACTURING PTE LTD its whole right, title and interest in and to the invention and GLAXO WELLCOME MANUFACTURING PTE LTD in turn hereby assigns and transfers to GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED its whole right, title and interest in and to the invention and in and to the application.

GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED in turn hereby assigns and transfers to GlaxoSmithKline Intellectual Property Development Limited its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof, and I/we the inventor(s) and GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED:

AND GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we the inventor(s) for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GlaxoSmithKline Intellectual Property Development Limited to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, its successors and assigns, the whole right, title and interest in and to the invention and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

I ACKNOWLEDGE that by way of this document, my employer is further assigning the invention to GLAXO WELLCOME MANUFACTURING PTE LTD. I FURTHER ACKNOWLEDGE that I waived any pre-emptive rights or rights of first refusal that I may have had in the invention, pursuant to any applicable laws or regulations, in the Intellectual Property Agreement between me and my employer. I hereby reaffirm that waiver and confirm that any such rights in the invention have been refused.

IN WITNESS whereof and with effect from the 29 Jan 2014, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD, GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name	Signatu	re	Date	
Xiao DING:	Mar )"	<b>-</b>	may - 19-2013	
Qian LIU:				
Yingxia SANG:				
Luigi Piero STASI	;			
Zehong WAN:				
Baowei ZHAO:				
	MARAUS TW nithkline (china) r&d co pte ltd, glaxosmithkli	MPANY LIMITED, GL		
GLAXOSMITHKLINE  Market Class Control  Signature	INTELLECTUAL PROPERT		MITED: /29 HAT 2015	.~ }

ASSIGNMENT

WHEREAS I/WE, Xiao DING; Qian Liu; Yingxia SANG; Zehong WAN and Baowei ZHAO all citizens of China and Luigi Piero STASI a citizen of Italy, all of Pudong, Shanghai, China (hereinafter called "the inventor(s)") have invented or discovered certain improvements in "Compounds" (hereinafter referred to as "the invention and improvements") for which priority application PCT/CN2014/000139 was filed on 29 Jan 2014 in the Patent Cooperation Treaty, and for which a PCT international application PCT/CN2015/000055

was filed on 28 Jan 2015, designating the United States of America.

WHEREAS the invention, being made in the course of my emptoyment, belongs to my/our employer at that time, namely GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED a company incorporated in China whose registered address is Building 3, 898 Halei Road Zhangjiang Hi-tech Park, Pudong, Shanghai

201203, China, and

WHEREAS GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED has authorised and requested our

making the application, and

WHEREAS GLAXO WELLCOME MANUFACTURING PTE LTD, a company organised and existing under the laws of Singapore and having its registered office at 1 Pioneer Sector 1, Jurong, Singapore 68413 has acquired from GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED the rights in the invention by virtue

of an agreement dated 1 April 2008.

WHEREAS GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from GLAXO WELLCOME MANUFACTURING PTE LTD the whole right, title and

interest in and to the invention and in and to the application, and

WHEREAS GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and in and to any applications for the invention and any Letters Patent to be obtained therefor, in all countries, including the

United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern be it known that I/we, the inventor(s), hereby confirm the ownership by GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED of the invention and the application by operation of law and, if under the law of the United States of America I/we the inventor(s) have any ownership right, title and interest in and to the invention and the application, (which I/we do not believe to be the case and claim no ownership right, title or interest in and to the invention and to the application based on the law of China), I/we the inventor(s) nevertheless hereby assign and transfer such ownership right, title and

interest in and to the invention and to the application, including the right to claim priority from the application in respect of any subsequent applications, to GLAXOSMITHKUNE (CHINA) R&D COMPANY LIMITED,

GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED in turn hereby assigns and transfers to GLAXO WELLCOME MANUFACTURING PTE LTD its whole right, title and interest in and to the invention and GLAXO WELLCOME MANUFACTURING PTE LTD in turn hereby assigns and transfers to GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED its whole right, title and interest in and to the invention and in and to the application.

GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED in turn hereby assigns and transfers to GlaxoSmithKline Intellectual Property Development Limited its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof, and I/we the inventor(s) and GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED:

AND GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we the inventor(s) for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GlaxoSmithKline Intellectual Property Development Limited to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, its successors and assigns, the whole right, title and interest in and to the invention and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

I ACKNOWLEDGE that by way of this document, my employer is further assigning the invention to GLAXO WELLCOME MANUFACTURING PTE LTD. I FURTHER ACKNOWLEDGE that I waived any pre-emptive rights or rights of first refusal that I may have had in the invention, pursuant to any applicable laws or regulations, in the Intellectual Property Agreement between me and my employer. I hereby reaffirm that waiver and confirm that any such rights in the invention have been refused.

IN WITNESS whereof and with effect from the 29 Jan 2014, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD, GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

mventor vaine	ວເຕີນອະຕາລ	vate	
Xiao DING:			
Qian LIU:		***************************************	
Yingxia SANG:			
Luigi Piero STASI: (公仏	July-	87-sek-ress	
Zehong WAN:			
Baowei ZHAO:		••••••	
	E (CHINA) R&D COMPANY LIM		*d
		CH AND DEVELOPMENT LIMITED and	
GLAXOSMITHKLINE INTELLI	ECTUAL PROPERTY DEVELOR		
	-9-	Date: 127 October LOIS	
Signature			

ASSIGNMENT

WHEREAS I/WE, Xiao DING; Qian Liu; Yingxia SANG; Zehong WAN and Baowei ZHAO all citizens of China and Liugi Piero STASI a citizen of Italy, all of Pudong, Shanghai, China (hereinafter called "the inventor(s)") have invented or discovered certain improvements in "Compounds" (hereinafter referred to as "the invention and improvements") for which priority application PCT/CN2014/000139 was filled on 29 Jan 2014 in the Patent Cooperation Treaty, and for which a PCT international application PCT/CN2015/000055 was filled on 28 Jan 2015, designating the United States of America.

WHEREAS the invention, being made in the course of my employment, belongs to my/our employer at that time, namely GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED a company incorporated in China whose registered address is Building 3, 898 Halei Road Zhangjiang Hi-tech Park, Pudong, Shanghai 201203, China, and

WHEREAS GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED has authorised and requested our making the application, and

WHEREAS GLAXO WELLCOME MANUFACTURING PTE LTD, a company organised and existing under the laws of Singapore and having its registered office at 1 Pioneer Sector 1, Jurong, Singapore 68413 has acquired from GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED the rights in the invention by virtue of an agreement dated 1 April 2008.

WHEREAS GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from GLAXO WELLCOME MANUFACTURING PTE LTD the whole right, title and interest in and to the invention and in and to the application, and

WHEREAS GLAXOSMITHKUNE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and in and to any applications for the invention and any Letters Patent to be obtained therefor, in all countries, including the United States of America, its territories and possessions;

NOW. THEREFORE, to all whom it may concern be it known that I/we, the inventor(s), hereby confirm the ownership by GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED of the invention and the application by operation of law and, if under the law of the United States of America I/we the inventor(s) have any ownership right, title and interest in and to the invention and the application, (which I/we do not believe to be the case and claim no ownership right, title or interest in and to the invention and to the application based on the law of China), I/we the inventor(s) nevertheless hereby assign and transfer such ownership right, title and

interest in and to the invention and to the application, including the right to claim priority from the application in respect of any subsequent applications, to GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED.

GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED in turn hereby assigns and transfers to GLAXO WELLCOME MANUFACTURING PTE LTD its whole right, title and interest in and to the invention and GLAXO WELLCOME MANUFACTURING PTE LTD in turn hereby assigns and transfers to GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED its whole right, title and interest in and to the invention and in and to the application.

GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED in turn hereby assigns and transfers to GlaxoSmithKline Intellectual Property Development Limited its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof, and I/we the inventor(s) and GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED:

AND GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we the inventor(s) for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GlaxoSmithKline Intellectual Property Development Limited to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, its successors and assigns, the whole right, title and interest in and to the invention and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

I ACKNOWLEDGE that by way of this document, my employer is further assigning the invention to GLAXO WELLCOME MANUFACTURING PTE LTD. I FURTHER ACKNOWLEDGE that I waived any pre-emptive rights or rights of first refusal that I may have had in the invention, pursuant to any applicable laws or regulations, in the Intellectual Property Agreement between me and my employer. I hereby reaffirm that waiver and confirm that any such rights in the invention have been refused.

IN WITNESS whereof and with effect from the 29 Jan 2014, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED, GLAXO WELLCOME MANUFACTURING PTE LTD, GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name	Signature	Date
Xiao DING:		
Qian LIU:	<i>C 3</i> -	16-AUT-2015
Yingxia SANG:	Ymyxa song	16-10for-2015
Luigi Piero STASI:		
Zehong WAN:	Telegov-	16-Apr-2015
Baowei ZHAO:	Baowei Jao	16-Apr-2015
Official of GLAXOSMITH MANUFACTURING PTE	CHARTO LEWSEN(AN) KLINE (CHINA) R&D COMPANY LIMIT LTD, GLAXOSMITHKLINE RESEARC FELLECTUAL PROPERTY DEVELOPM	H AND DEVELOPMENT LIMITED and
Signature		Date: V N N N N N N N N N N N N N N N N N N

### ASSIGNMENT

WHEREAS I/WE, Colin Michael EDGE a citizen of United Kingdom of Stevenage, Hertfordshire, England (hereinafter called "the inventor(s)") have invented or discovered certain improvements in "Compounds" (hereinafter referred to as "the invention and improvements") for which priority application PCT/CN2014/000139 was filed on 29 Jan 2014 in the Patent Cooperation Treaty, and for which a PCT international application PCT/CN2015/000055 was filed on 28 Jan 2015, designating the United States of America.

WHEREAS the invention and improvements, being made in the course of my employment, belong to my/our employer at that time, namely GLAXOSMITHKLINE SERVICES UNLIMITED, a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, and

WHEREAS GLAXOSMITHKLINE SERVICES UNLIMITED has authorised and requested our making the application, and

WHEREAS GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED, a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring from GLAXOSMITHKLINE SERVICES UNLIMITED the whole right, title and interest in and to the invention and improvements and in and to the application, and

WHEREAS GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED a company incorporated in England whose registered address is 980 Great West Road, Brentford, Middlesex TW8 9GS, England, is desirous of acquiring the whole right, title and interest in and to the invention and improvements and in and to any applications for the invention and improvements and any Letters Fatent to be obtained therefor, in all countries, including the United States of America, its territories and possessions;

NOW, THEREFORE, to all whom it may concern be it known that I/we, the inventor(s), hereby confirm the ownership by GLAXOSMITHKLINE SERVICES UNLIMITED of the invention and improvements and the application by operation of law and, if under the law of the United States of America I/we the inventor(s) have any ownership right, title and interest in and to the invention and improvements and the application, (which I/we do not believe to be the case and claim no ownership right, title or interest in and to the invention and improvements and to the application based on the law of the United Kingdom), I/we the inventor(s) nevertheless hereby assign and transfer such ownership right, title and interest in and to the invention and improvements and to the application, including the right to claim priority from the application in respect of any subsequent applications, to GLAXOSMITHKLINE SERVICES UNLIMITED. GLAXOSMITHKLINE SERVICES UNLIMITED in turn hereby assigns and transfers to GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED its whole right, title and interest in and to the invention and in and to the application.

GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED in turn hereby assigns and transfers to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED its whole right, title and interest in all countries, including the United States of America, its territories and possessions in and to the invention and improvements and in and to the application including the right to claim priority from the application in respect of any subsequent applications, and in and to any divisional application, continuation or continuation in part application thereof, and in and to any Supplementary Protection Certificate, extension or re-issue thereof, and I/we the inventor(s) and GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED;

AND GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED hereby, and I/we the inventor(s) for myself/ourselves and my/our respective executors and legal representatives hereby, agree at the request and cost of GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED to provide information and make execute and deliver any and all other instruments in writing, and any and all further acts, applications, papers, affidavits, assignments and other documents which may be possible and are necessary or desirable to more effectually secure to and vest in GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, its successors and assigns, the whole right, title and interest in and to the invention and improvements and in and to the application hereby assigned and transferred in all countries, including the United States of America, its territories and possessions.

IN WITNESS whereof and with effect from the 29 Jan 2014, the inventor(s) and the Attorney & Authorised Official of GLAXOSMITHKLINE SERVICES UNLIMITED and GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LIMITED and GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED have hereunto set their respective hands.

Inventor Name	e Siç	gnature	Date	Date	
Colin Michael	EDGE:	lofg	15	5th April 2015	
SIGNED by	RI CHAKD	LEASENAN		As the Attorney &	
Authorised Officia	i of GLAXOSMITHK	LINE SERVICES UNL	IMITED and GLAXOSMI	THKLINE RESEARCH	
AND DEVELOPM	IENT LIMITED and C	GLAXOSMITHKLINE (	NTELLECTUAL PROPER	RTY DEVELOPMENT	
LIMITED:		Da	te: <u>30 MR &amp;</u>	<u> 85</u>	
Signature					

PATENT REEL: 049910 FRAME: 0999

RECORDED: 07/30/2019