

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4359510

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
SEQUENCE:	4	
CONVEYING PARTY DATA		
	Name	Execution Date
	NOVARTIS AG	08/30/2016
RECEIVING PARTY DATA		
Name:	GLAXOSMITHKLINE BIOLOGICALS SA	
Street Address:	RUE DE L'INSTITUT 89	
City:	RIXENSART	
State/Country:	BELGIUM	
Postal Code:	1330	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Patent Number:	7612192
CORRESPONDENCE DATA		
Fax Number:	(415)268-7522	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
Phone:	415-268-6846	
Email:	mstout@mofo.com	
Correspondent Name:	OTIS LITTLEFIELD	
Address Line 1:	MORRISON & FOERSTER LLP	
Address Line 2:	425 MARKET STREET	
Address Line 4:	SAN FRANCISCO, CALIFORNIA 94105-2482	
ATTORNEY DOCKET NUMBER:	529552001501	
NAME OF SUBMITTER:	OTIS LITTLEFIELD	
SIGNATURE:	/Otis Littlefield/	
DATE SIGNED:	04/07/2017	
Total Attachments: 5		
source=4_NAG_to_GSK-52955-2001501#page1.tif		
source=4_NAG_to_GSK-52955-2001501#page2.tif		
source=4_NAG_to_GSK-52955-2001501#page3.tif		
source=4_NAG_to_GSK-52955-2001501#page4.tif		

CONFIRMATORY ASSIGNMENT

WE, **NOVARTIS AG** a company limited by shares duly incorporated in Switzerland and whose registered office is at Lichtstrasse 35, 4056 Basel, Switzerland do hereby declare that we are the owner of the following patents/ patent applications entitled "NEISSERIA GENOMIC SEQUENCES AND METHODS OF THEIR USE".

Country	Application Date	Application Number	Grant Date	Patent Number
AR	30-Apr-99	X		
AU	11-Mar-04	2004201096	24-Jan-08	2004201096
AU	21-Jul-03	2003235364	08-Feb-07	2003235364
AU	02-Jun-06	2006202355	03-Dec-09	2006202355
AU	26-Oct-09	2009230776	04-Oct-12	2009230776
AU	31-May-12	2012203235	07-Aug-14	2012203235
AU	21-Jan-05	2005200246		
AU	30-Apr-99	1999039677	25-Sep-03	761780
AU	08-Oct-99	2000012022		
AU	08-Mar-00	2000032492	07-Jul-05	780308
AT	14-Dec-05	05077865 3	24-Oct-07	EP1645631
AT	30-Apr-99	99922752 3	05-Mar-08	EP1093517
AT	25-Feb-08	08003373 1	04-Mar-15	EP1944371
AT	08-Mar-00	00910392 0	29-Apr-09	EP1185691
BE	08-Mar-00	00910392 0	29-Apr-09	EP1185691
BE	25-Feb-08	08003373 1	04-Mar-15	EP1944371
BE	30-Apr-99	99922752 3	05-Mar-08	EP1093517
BE	14-Dec-05	05077865 3	24-Oct-07	EP1645631
BR	27-Mar-12	BR1220120068284		
BR	30-Apr-99	PI9910089-4		
BR	08-Mar-00	PI0010361-6		
BR	08-Oct-99	PI9914374-7		
CA	08-Mar-00	2371032		
CA	08-Oct-99	2346713		
CA	30-Apr-99	2330838		
CA	04-Nov-08	2650642		
CN	30-Apr-99	99808145 0	13-Jul-05	ZL99808145 0
CN	05-Mar-08	200810081721 4	18-Jul-12	ZL200810081721 4
CN	08-Oct-99	200510008275 0		
CN	08-Mar-00	200710003738 3		
CN	30-Apr-99	200510072807 7	09-Apr-08	ZL200510072807 7
CN	08-Mar-00	00809820 4		
CN	08-Mar-00	99814108 9		
CY	08-Mar-00	00910392 0	29-Apr-09	EP1185691
CY	14-Dec-05	05077865 3	24-Oct-07	EP1645631
CY	30-Apr-99	99922752 3	05-Mar-08	EP1093517
DK	30-Apr-99	99922752 3	05-Mar-08	EP1093517
DK	14-Dec-05	05077865 3	24-Oct-07	EP1645631

DK	08-Mar-00	00910392 0	29-Apr-09	EP1185691
EP	08-Mar-00	05075284 9		
EP	25-Feb-08	10178537 6		
EP	08-Oct-99	05075407 6		
EP	25-Feb-08	10178545 9		
EP	22-Sep-10	10178522 8		
EP	25-Feb-08	10178529 3		
EP	22-Sep-10	10178542 6		
EP	22-Sep-10	10178503 8		
EP	25-Feb-08	10178521 0		
EP	25-Feb-08	10178532 7		
EP	25-Feb-08	10178517 8		
EP	22-Sep-10	10178535 0		
EP	23-Sep-10	10179068 1		
EP	25-Sep-10	10179752 0		
EP	08-Oct-99	99970470 3		
EP	25-Feb-08	10178543 4		
EP	14-Dec-05	05077865 3	24-Oct-07	EP1645631
EP	25-Feb-08	08003373 1	04-Mar-15	EP1944371
EP	30-Apr-99	99922752 3	05-Mar-08	EP1093517
EP	08-Mar-00	00910392 0	29-Apr-09	EP1185691
EP	22-Sep-10	10178510 3		
EP	22-Sep-10	10178513 7		
EP	22-Sep-10	10178538 4		
EP	22-Sep-10	10178533 5		
EP	22-Sep-10	10178530 1		
EP	22-Sep-10	10178516 0		
EP	22-Sep-10	10178520 2		
FI	14-Dec-05	05077865 3	24-Oct-07	EP1645631
FI	30-Apr-99	99922752 3	05-Mar-08	EP1093517
FI	08-Mar-00	00910392 0	29-Apr-09	EP1185691
FR	08-Mar-00	00910392 0	29-Apr-09	EP1185691
FR	30-Apr-99	99922752 3	05-Mar-08	EP1093517
FR	25-Feb-08	08003373 1	04-Mar-15	EP1944371
FR	14-Dec-05	05077865 3	24-Oct-07	EP1645631
GB	14-Dec-05	05077865 3	24-Oct-07	EP1645631
GB	25-Feb-08	08003373 1	04-Mar-15	EP1944371
GB	30-Apr-99	99922752 3	05-Mar-08	EP1093517
GB	28-Feb-00	0004695		
GB	08-Mar-00	00910392 0	29-Apr-09	EP1185691
DE	08-Mar-00	00910392 0	29-Apr-09	60042114 7
DE	14-Dec-05	05077865 3	24-Oct-07	69937419 7
DE	25-Feb-08	08003373 1	04-Mar-15	69945286 4
DE	30-Apr-99	99922752 3	05-Mar-08	69938302 1
GR	14-Dec-05	05077865 3	24-Oct-07	EP1645631
GR	30-Apr-99	99922752 3	05-Mar-08	EP1093517

GR	08-Mar-00	00910392 0	29-Apr-09	EP1185691
HK	03-Oct-06	06110923 5	09-Jan-09	HK1090382
IE	08-Mar-00	00910392 0	29-Apr-09	EP1185691
IE	30-Apr-99	99922752 3	05-Mar-08	EP1093517
IE	14-Dec-05	05077865 3	24-Oct-07	EP1645631
IE	25-Feb-08	08003373 1	04-Mar-15	EP1944371
IT	25-Feb-08	502015000017471	04-Mar-15	EP1944371
IT	30-Apr-99	502008901630411	05-Mar-08	EP1093517
IT	14-Dec-05	502008901592949	24-Oct-07	EP1645631
IT	08-Mar-00	00910392 0	29-Apr-09	EP1185691
JP	30-Apr-99	2009-125889		
JP	30-Apr-99	2010-031866		
JP	21-Jun-10	2012-140208		
JP	30-Apr-99	2000-547235	05-Oct-12	5102414
JP	21-Jun-12	2012-140207		
JP	03-Sep-13	2013-157834		
JP	03-Sep-13	2013-157835		
JP	05-Aug-16	2016-154472		
JP	08-Mar-00	2000-615413		
JP	08-Oct-99	2000-576277		
LU	14-Dec-05	05077865 3	24-Oct-07	EP1645631
LU	30-Apr-99	99922752 3	05-Mar-08	EP1093517
LU	08-Mar-00	00910392 0	29-Apr-09	EP1185691
MX	05-Dec-07	MX/A/07/015357	24-Jul-08	259035
MX	19-Sep-08	MX/a/2008/011992	31-May-11	287068
MX	31-May-11	MX/a/2011/005683	27-Sep-13	313684
MX	16-Oct-13	MX/a/2013/012066	25-May-16	339406
MX	30-Apr-99	PA/a/00/010722	19-Sep-08	260662
MX	08-Mar-00	PA/a/01/011047	07-Jan-10	273112
MX	08-Oct-99	PA/a/01/003557	25-Mar-10	274727
MX	04-Dec-14	MX/a/2014/014862		
MX	26-Sep-13	MX/a/2013/011115		
MC	30-Apr-99	99922752 3	05-Mar-08	EP1093517
MC	08-Mar-00	00910392 0	29-Apr-09	EP1185691
MC	14-Dec-05	05077865 3	24-Oct-07	EP1645631
NL	08-Mar-00	00910392 0	29-Apr-09	EP1185691
NL	14-Dec-05	05077865 3	24-Oct-07	EP1645631
NL	25-Feb-08	08003373 1	04-Mar-15	EP1944371
NL	30-Apr-99	99922752 3	05-Mar-08	EP1093517
NZ	30-Apr-99	508366	05-Jul-04	508366
NZ	08-Mar-00	528063		
NZ	30-Apr-99	548930		
NZ	08-Mar-00	538661		
NZ	08-Oct-99	528121		
NZ	30-Apr-99	532665	09-Mar-06	532665
NZ	21-Jul-05	541361	14-Aug-08	541361

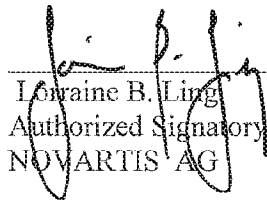
NZ	30-Apr-99	527182	07-Oct-04	527182
NZ	20-Apr-05	539531		
NZ	08-Oct-99	511540	09-Sep-04	511540
NZ	08-Mar-00	515654	29-Mar-04	515654
WO	08-Oct-99	PCT/US99/023573		
WO	08-Mar-00	PCT/US00/005928		
WO	30-Apr-99	PCT/US99/009346		
PT	08-Mar-00	00910392 0	29-Apr-09	EP1185691
PT	14-Dec-05	05077865 3	24-Oct-07	EP1645631
PT	30-Apr-99	99922752 3	05-Mar-08	EP1093517
PT	25-Feb-08	08003373 1	04-Mar-15	EP1944371
RU	30-Apr-99	2000130221	20-Apr-04	2227043
RU	08-Oct-99	X		
RU	08-Mar-00	2001132325	27-Jul-04	2233328
RU	08-Oct-99	2001112411	10-Feb-04	2223492
CH	08-Mar-00	00910392 0	29-Apr-09	EP1185691
CH	25-Feb-08	08003373 1	04-Mar-15	EP1944371
CH	14-Dec-05	05077865 3	24-Oct-07	EP1645631
CH	30-Apr-99	99922752 3	05-Mar-08	EP1093517
ES	30-Apr-99	99922752 3	05-Mar-08	EP1093517
ES	14-Dec-05	05077865 3	24-Oct-07	EP1645631
ES	25-Feb-08	08003373 1	04-Mar-15	EP1944371
ES	08-Mar-00	00910392 0	29-Apr-09	EP1185691
SE	08-Mar-00	00910392 0	29-Apr-09	EP1185691
SE	30-Apr-99	99922752 3	05-Mar-08	EP1093517
SE	14-Dec-05	05077865 3	24-Oct-07	EP1645631
US	30-Apr-99	09/674546	18-Aug-09	7576176
US	26-Jan-12	13/359459		
US	21-Jul-15	14/804756		
US	31-Mar-06	11/395121		
US	23-Mar-11	13/070448	22-Sep-15	9139621
US	26-Jan-12	13/359471	03-Sep-13	8524251
US	11-Jan-08	12/013047	02-Aug-11	7988979
US	11-Aug-04	10/915740	03-Nov-09	7612192
US	26-Jan-12	13/359442	02-Feb-16	9249196
US	01-Aug-14	14/450075	23-Feb-16	9266929
US	01-Aug-14	14/450082	02-Feb-16	9249198
US	26-Feb-07	11/711740		
US	30-Apr-99	60/132068		
US	25-Feb-99	60/121528		
US	01-May-98	60/083758		
US	09-Oct-98	60/103796		
US	31-Jul-98	60/094869		
US	02-Sep-98	60/098994		
US	02-Sep-98	60/099062		
US	09-Oct-98	60/103749		

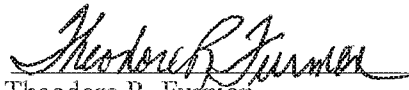
US	09-Oct-98	60/103794
US	08-Mar-00	10/018470
US	08-Oct-99	09/806866

And in accordance with the Intellectual Property Assignment Agreement dated 2 March 2015 between **NOVARTIS AG** and **GLAXOSMITHKLINE BIOLOGICALS SA**, for good and valuable consideration, the receipt of which is hereby acknowledged, we **NOVARTIS AG** have assigned the entire right, title and interest and from which priority may be claimed from one or more applications, or any division, continuation and continuation-in-part of said application to in and to said patent application and all countries in which this/ these application(s) are filed to **GLAXOSMITHKLINE BIOLOGICALS SA** of Rue de l'Institut 89, 1330 Rixensart, Belgium

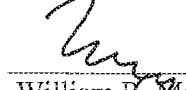
Dated this 30 day of August 2016

Signed for and on behalf of
NOVARTIS AG


Lorraine B. Ling
Authorized Signatory on behalf of
NOVARTIS AG


Theodore R. Furman
Authorized Signatory on behalf of
NOVARTIS AG

Signed for and on behalf of
GLAXOSMITHKLINE BIOLOGICALS SA


William R. Majarian
Authorized Official on behalf of
GLAXOSMITHKLINE BIOLOGICALS SA