504194313 01/24/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4240988

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
SEQUENCE:	4	

CONVEYING PARTY DATA

Name	Execution Date
DEREK O'HAGAN	09/22/2015

RECEIVING PARTY DATA

Name:	NOVARTIS VACCINES AND DIAGNOSTICS INC.	
Street Address:	350 MASSACHUSETTS AVENUE	
City:	CAMBRIDGE	
State/Country:	MASSACHUSETTS	
Postal Code:	02139	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14764997

CORRESPONDENCE DATA

Fax Number: (415)268-7522

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: 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:	303822015800	
NAME OF SUBMITTER:	BMITTER: OTIS LITTLEFIELD	
SIGNATURE:	/Otis Littlefield/	
DATE SIGNED:	01/24/2017	

Total Attachments: 3

source=OHagan_to_NVD_Inc_to_Novartis_AG_to_GSK_30382-2015800#page1.tif source=OHagan_to_NVD_Inc_to_Novartis_AG_to_GSK_30382-2015800#page2.tif source=OHagan_to_NVD_Inc_to_Novartis_AG_to_GSK_30382-2015800#page3.tif

PATENT 504194313 REEL: 041068 FRAME: 0802

VN55517

ASSIGNMENT

WHEREAS I/WE, Derek O'HAGAN a citizen of the United States of Cambridge, Massachusetts, US (hereinafter called "the inventor(s)") have invented or discovered certain improvements in "INTRADERMAL DELIVERY OF IMMUNOLOGICAL COMPOSITIONS COMPRISING TOLL-LIKE RECEPTOR AGONISTS" (hereinafter referred to as "the invention and improvements") for which priority application 61/759751 was filed on 01 Feb 2013 in the United States; 13169596.7 filed on 28 May 2013 in the European Patent Office, and for which a PCT international application PCT/EP2014/051860 was filed on 30 Jan 2014, designating the United States of America.

WHEREAS NOVARTIS VACCINES AND DIAGNOSTICS INC., a company organised under the laws of the State of Delaware, whose address is 350 Massachusetts Avenue, Cambridge, Massachusetts 02139, United States of America, is desirous of acquiring the whole right, title and interest in and to said invention and improvements, and in and to any applications for said invention and improvements and any Letters Patent to be obtained therefor, in all countries, including the United States, its territories and possessions,

WHEREAS NOVARTIS AG, a company incorporated in Switzerland whose registered address is Lichtstrasse 35, 4056 Basel, Switzerland, is desirous of acquiring from NOVARTIS VACCINES AND DIAGNOSTICS INC, the whole right, title and interest in and to the invention and improvements and in and to the application, and

WHEREAS GLAXOSMITHKLINE BIOLOGICALS SA a company incorporated in Belgium whose registered address is Rue de l'Institut 89, B-1330 Rixensart, Belgium, is desirous of acquiring from NOVARTIS AG 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 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 NOVARTIS VACCINES AND DIAGNOSTICS INC. of the invention and

PATENT REEL: 041068 FRAME: 0803 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 States of America). 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 NOVARTIS VACCINES AND DIAGNOSTICS INC. NOVARTIS VACCINES AND DIAGNOSTICS INC. NOVARTIS VACCINES AND DIAGNOSTICS INC in turn hereby assigns and transfers to NOVARTIS AG its whole right, title and interest in and to the invention and improvements and in and to the application.

NOVARTIS AG in turn hereby assigns and transfers to GLAXOSMITHKLINE BIOLOGICALS SA 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 NOVARTIS VACCINES AND DIAGNOSTICS INC. and NOVARTIS AG authorise and request any patent arising therefrom, in all countries, including the United States of America, its territories and possessions, be issued to GLAXOSMITHKLINE BIOLOGICALS SA hereby;

AND NOVARTIS VACCINES AND DIAGNOSTICS INC., and NOVARTIS AG, 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 BIOLOGICALS SA** hereby 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 BIOLOGICALS SA** hereby, its successors and assigns, the whole right, title and interest in and to the invention and improvements and in and to the application hereby

PATENT REEL: 041068 FRAME: 0804

BAS NASIONEN SEMBLES CO. C.	
	the 01 Feb 2013, the inventor(s) and the Attorney & ES AND DIAGNOSTICS INC., NOVARTIS AG and
GLAXOSMITHKLINE BIOLOGICALS SA h	
*	•
Verese O'll	9/22/15
Derek O'HAGAN	Date
SIGNED by Helen Lee	
	VARTIS VACCINES AND DIAGNOSTICS INC.:
Mr.	Date: 22 Sajkmlin 2015
Signature HELENLEE	,, ,
SIGNED by	
As the Attorney & Authorised Official of NO	VARTIS AG
$\mathcal{A}(\mathcal{A})$	
However thomas	Date: 23 September, 2015
\$ighature ()	*
The second of th	
SIGNED by Theodore R. Furman	
As the Attorney & Authorised Official of GLA	AXOSMITHKLINE BIOLOGICALS SA:
Handerck Fringer	22 September 2015 Date:
Signature	THE STATE OF THE S

assigned and transferred in all countries, including the United States of America, its territories and

PATENT REEL: 041068 FRAME: 0805

RECORDED: 01/24/2017

possessions.