504800244 03/01/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4846976

SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
		Name	Execu	tion Date	
SUBASH CHANDRA DA	S		05/10/2	017	
JOSEPH DAVID SANTA	NGELO		05/16/2	017	
DAN THOMAS STINCHCOMB			05/17/2	017	
JORGE E. OSORIO			05/20/2	017	
RECEIVING PARTY DA	ТА				
Name:	1	TAKEDA VACCINES, INC.			
Street Address:	ONE TA	ONE TAKEDA PARKWAY			
City:	DEERFI	DEERFIELD			
State/Country:	ILLINOI	ILLINOIS			
Postal Code:	60015				
PROPERTY NUMBERS Total: 1 Property Type Application Number: 1579		Number			
Application Number	1	5796403			
Application Number:	1	5796403			
Application Number: CORRESPONDENCE D		5796403			
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Attorney Docket No.: 606772001000 Client Reference No.: P20932US02

ASSIGNMENT

This assignment is by:

- Subash Chandra DAS c/o Takeda Vaccines, Inc. 2155 Analysis Drive Bozeman, Montana 59718
- Joseph David SANTANGELO c/o Takeda Vaccines, Inc.
 2155 Analysis Drive Bozeman, Montana 59718
- Dan Thomas STINCHCOMB c/o Takeda Vaccines, Inc. 2155 Analysis Drive Bozeman, Montana 59718
- Jorge E. OSORIO c/o Takeda Vaccines, Inc. 2155 Analysis Drive Bozeman, Montana 59718

(referred to in this Assignment as "Assignors"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: Takeda Vaccines, Inc. Address: One Takeda Parkway, Deerfield, IL 60015 A juristic entity duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under said patent application and the inventions covered thereby.

Assignors have invented certain new and useful inventions in:

HAND, FOOT, AND MOUTH VACCINES AND METHODS OF MANUFACTURE AND USE THEREOF

for which the following application has been filed in the United States of America.

Serial No.: 14/935,227 Filing Date: November 6, 2015

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged,

1. Assignors hereby sell, assign, transfer and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal

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PATENT REEL: 045079 FRAME: 0422

Attorney Docket No.: 606772001000 Client Reference No.: P20932US02

representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

2. Assignors represent, warrant and covenant (a) that, at the time of execution and delivery of this agreement, Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignors solely and lawfully owned the entire right, title and interest in and to said inventions and said application for letters patent, and the same were unencumbered and that Assignors sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to said inventions and said applications for letters patent.

3. Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.

4. Assignors hereby authorize and request the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

5. "I hereby grant attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known."

In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

ASSIGNOR(s): Date: 05710/2017

han bam Signature: Subash Chandra DAS

Signature:

Date: 5/17/20/7

Date:

Date: _____

Joseph David SANTANGELO Signature:

Dan Thomas STINCHCOMB

Signature:

2

Jorge E. OSORIO

ASSIGNEE Date: 18 May 2017

Signature:

Name: Mark J. Buonaiuto Title: Authorized Signatory Company: Takeda Vaccines, Inc.

sf-3756769

PATENT REEL: 045079 FRAME: 0423

representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

2. Assignors represent, warrant and covenant (a) that, at the time of execution and delivery of this agreement. Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignors have good and full right and lawful authority to self and convey the same in the manner set forth in this agreement, or (b) that Assignors solely and lawfully owned the entire right, title and interest in and to said inventions and said application for letters patent, and the same were unencumbered and that Assignors sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to said inventions and said applications for letters patent.

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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

ASSIGNOR(s):

Date:	Signature:	
Date: 16 Mar 17	Signature:	Subash Chandra DAS
Date:	Signature:	Dan Thomas STINCHCOMB
Date:	Signature:	Jorge E. OSORIO
<u>ASSIGNEE:</u> Date: <u>12 June</u> 2017	<i>•</i>	1 <u>Male Burnand</u> anc: Merk J. Buonaluto
		tle: Authorized Signatory ompany: Takeda Vaccines, Inc.

xf-3755769

representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

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Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts 3. necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignce, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and postgrant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.

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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

ASSIGNOR(s);

Signature: _____ Date Subash Chandra DAS Date: Signature: _____ Joseph David SANTANGELO Date: Signature: Dan Thomas STINCHCOMB Date: _______ N ~ 20 2017 Signature: ASSIGNEE: Date: 26 May 2017 Signature: Mame: Mark J. Buonaluto Title: **Authorized Signatory**

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Company: Takeda Vaccines, Inc.

PATENT REEL: 045079 FRAME: 0425

RECORDED: 03/01/2018