505078405 09/05/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HERBERT K. LYERLY	10/19/2015
TAKUYA OSADA	10/19/2015
ZACHARY C. HARTMAN	10/25/2015

RECEIVING PARTY DATA

Name:	Duke University	
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Internal Address:	Box 90083	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16044269

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	5667-00439	
NAME OF SUBMITTER:	TAMBRYN K. VANHEYNINGEN	
SIGNATURE:	/Tambryn K. VanHeyningen/	
DATE SIGNED:	09/05/2018	

Total Attachments: 3

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PATENT 505078405 REEL: 046790 FRAME: 0317

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PATENT REEL: 046790 FRAME: 0318

ASSIGNMENT

Pursuant to our obligation to DUKE UNIVERSITY (herein referred to as "Assignee"), having its principal place of business at:

2812 Erwin Road, Suite 306 Box 90083 Durham, North Carolina 27705

and for other valuable and sufficient consideration, receipt whereof is hereby acknowledged, we:

Herbert K. Lyerly
Box 2606
Department of Surgery, Duke University
Durham, NC 27710

Takuya Osada Box 2606 Department of Surgical Oncology, Duke University Durham, NC 27710

Zachary C. Hartman
Box 2606
Department of Surgery, Duke University
Durham, NC 27710

confirm our obligation to and effective as of July 7, 2014, hereby sell, assign and convey, unto Assignee, its successors and assigns, our entire right, title and interest –

(1) in and to an invention entitled "VACCINES AGAINST AN ONCOGENIC ISOFORM OF ESR1 AND METHODS OF USING THE SAME" for which International Patent Application No. PCT/US2015/039367 (Attorney Docket No. 5667-00300) was filed July 7, 2015 (hereinafter the "International Patent Application"), which application claims the benefit of priority of U.S. Provisional Application 62/021,586 filed July 7, 2014 (hereinafter the "United States provisional patent application");

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(2) in and to said International Patent Application and the United States Provisional Patent Application, in and to all other patent applications derived from or relating to said International Patent Application and the United States Provisional Patent Application (including divisional, continuation, continuation-in-part, §111(b) provisional, §111(a), and reissue applications) based upon said invention, and in and to the patent or patents to be granted thereon, including reissues or reexaminations thereof, if any, to the full end of the term or terms for which said patent or patents may be granted;

(3) in and to all patent applications on said invention now or hereafter filed in countries foreign to the United States of America, and in and to any and all patents granted on said applications to the full end of the terms for which said patents may be granted; and

(4) in and to all applications filed under International Conventions on the invention or claiming priority to the International Patent Application and the United States Provisional Patent Application.

We agree that any patent applications with a claim to priority based on said International Patent Application and the United States Provisional Patent Application may be filed in the name of Assignee.

We hereby agree that we will, upon demand of Assignee, its successors or assigns, and without further consideration to us, execute any and all papers that may be necessary, or deemed to be necessary, by Assignee, its successors or assigns, to a complete fulfillment of the intent and purposes of this Assignment, it being understood that any expense incident to the execution of such papers shall be paid by Assignee, its successors and assigns, and not by us.

The Commissioner of Patents and Trademarks of the United States is hereby authorized and requested to issue said United States patent or patents to Assignee.

10/19/2015

$\frac{10/19/2015}{\text{Date}}$	Takuya Osada Inventor
10/25/15	
Date	Zachary C. Hartman Inventor

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