PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HARLAN S. ROBINS	03/16/2011
EDUS H. WARREN III	11/12/2010
CHRISTOPHER SCOTT CARLSON	03/07/2011

RECEIVING PARTY DATA

Name:	FRED HUTCHINSON CANCER RESEARCH CENTER
Street Address:	DIVISION OF BASIC SCIENCES, MAIL STOP A3-100
Internal Address:	P.O. BOX 190
City:	SEATTLE
State/Country:	WASHINGTON
Postal Code:	98109

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16023010

CORRESPONDENCE DATA

Fax Number: (202)842-7899

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: 2028427800

Email: zIPPatentDocketingMailboxUS@cooley.com
Correspondent Name: COOLEY LLP / ADAPTIVE BIOTECHNOLOGIES

Address Line 1: ATTN: PATENT GROUP

Address Line 2: 1299 PENNSYLVANIA AVENUE, NW, SUITE 700

Address Line 4: WASHINGTON, D.C. 20004

ATTORNEY DOCKET NUMBER:	ADBS-006/11US 323310-2583	
NAME OF SUBMITTER:	ALLA BRUKMAN	
SIGNATURE:	/Alla Brukman/	
DATE SIGNED:	06/29/2018	

Total Attachments: 6

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PATENT 504984901 REEL: 046242 FRAME: 0116

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> PATENT REEL: 046242 FRAME: 0117

ASSIGNMENT

WHEREAS, I, Harlan S. Robins, citizen of the United States, residing at 4418 Latona Avenue Northeast, Seattle, Washington 98105, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number HTCH-0107 ("the invention"), which is entitled METHOD OF MEASURING ADAPTIVE IMMUNITY ("the subject application"), and which claims priority to patent application number 61/220,344 filed June 25, 2009 ("the priority application"). I authorize and direct any of the attorneys responsible for prosecuting the subject application on behalf of the ASSIGNEE to insert the application number and filing date of the subject application in the final paragraph of this assignment as soon as the same shall have been made known to them.

AND WHEREAS, Fred Hutchinson Cancer Research Center, ASSIGNEE, having a place of business at 1100 Fairview Avenue North, Seattle, Washington 98109, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal

Page 1 of 2

DOCKET NO.: HTCH-0107

representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this	day of March, year of 2011,	
//// //: Signature		
************	********************	
The foregoing assignment covers patent application number 12/794,507, filed on June 4, 2010.		
9	Peter J. Kmidsen/	
	Name of Attorney: Peter J. Knodsen	
	Registration No. 40,682	
	Date of Insertion July 28, 2010	

STATEMENT OF NOTARY PUBLIC

STATE OF <u>Mashinglon</u>:

COUNTY OF King

On this $\sqrt{e^{t\Delta}}$ day of $\Delta \Delta x \Delta x \Delta x$, year of 2010, before me personally came the above named Harlan S. Robins to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Notary Public

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PATENT REEL: 046242 FRAME: 0119

ASSIGNMENT

WHEREAS, I, Edus H. Warren III, citizen of the United States, residing at 10770 Northeast Broomgerrie Road, Bainbridge Island, Washington 98110, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number HTCH-0107 ("the invention"), which is entitled METHOD OF MEASURING ADAPTIVE IMMUNITY ("the subject application"), and which claims priority to patent application number 61/220,344 filed June 25, 2009 ("the priority application"). I authorize and direct any of the attorneys responsible for prosecuting the subject application on behalf of the ASSIGNEE to insert the application number and filing date of the subject application in the final paragraph of this assignment as soon as the same shall have been made known to them.

AND WHEREAS, Fred Hutchinson Cancer Research Center, ASSIGNEE, having a place of business at 1100 Fairview Avenue North, Scattle, Washington 98109, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection. including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming

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DOCKET NO.: HTCH-0107

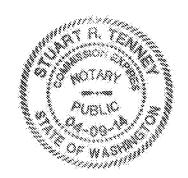
the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

STATEMENT OF NOTARY PUBLIC

STATE OF <u>Mashing ton</u>:
: 8i
county of <u>King</u>...:

On this 12.45 day of <u>A 2010 to the constant of 2010</u>, before me personally came the above named **Edus H. Warren III** to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.



Stuart C. Jenner

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PATENT REEL: 046242 FRAME: 0121

ASSIGNMENT

WHEREAS, I, Christopher Scott Carlson, citizen of the United States, residing at 5125 107th Avenue Northeast, Kirkland, Washington 98033, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number HTCH-0107 ("the invention"), which is entitled METHOD OF MEASURING ADAPTIVE IMMUNITY ("the subject application"), and which claims priority to patent application number 61/220,344 filed June 25, 2009 ("the priority application"). I authorize and direct any of the attorneys responsible for prosecuting the subject application on behalf of the ASSIGNEE to insert the application number and filing date of the subject application in the final paragraph of this assignment as soon as the same shall have been made known to them.

AND WHEREAS, Fred Hutchinson Cancer Research Center, ASSIGNEE, having a place of business at 1100 Fairview Avenue North, Scattle, Washington 98109, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming

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the invention, and generally do everything possible to aid the ASSIGNUE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 7th day of Mersh, year of 2011. Signature The foregoing assignment covers patent application number 12/794,507, filed on June 4, 2010. /Peter J. Knudsen/ Name of Attorney: Peter J. Knudsen Registration No. 40,682 Date of Insertion July 28, 2010

STATEMENT OF NOTARY PUBLIC

STATE OF VASION LAYS.

On this 1th day of New Un , year of 3010, before me personally came the above named Christopher Scott Carlson to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth,

Notary Public State of Washington KRISTI L SULLIVAN My Appointment Expires Cot 22, 2013. Notary Públic

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PATENT REEL: 046242 FRAME: 0123

RECORDED: 06/29/2018