

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM389415

| | |
|------------------------------|-------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | SECURITY INTEREST |

CONVEYING PARTY DATA

| Name | Formerly | Execution Date | Entity Type |
|--------------|----------|----------------|-----------------------|
| CAREDX, INC. | | 06/27/2016 | Corporation: DELAWARE |

RECEIVING PARTY DATA

| | |
|------------------------|---------------------------------------|
| Name: | EAST WEST BANK |
| Street Address: | 2350 Mission College Blvd., Suite 988 |
| City: | Santa Clara |
| State/Country: | CALIFORNIA |
| Postal Code: | 95054 |
| Entity Type: | Corporation: CALIFORNIA |

PROPERTY NUMBERS Total: 11

| Property Type | Number | Word Mark |
|----------------------|----------|----------------------------|
| Registration Number: | 4884670 | CAREDX |
| Serial Number: | 86220870 | CAREDX |
| Serial Number: | 86428517 | ALLOSURE |
| Serial Number: | 86425845 | RENAMAP |
| Serial Number: | 86404134 | RENASURE |
| Registration Number: | 3143352 | ALLOMAP |
| Registration Number: | 3442169 | ALLOMAP |
| Registration Number: | 3896426 | CAREDX |
| Registration Number: | 3199533 | XDX EXPRESSION DIAGNOSTICS |
| Registration Number: | 3437631 | XDX |
| Registration Number: | 3160957 | XDX |

CORRESPONDENCE DATA

Fax Number: 8585506420

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: 858-550-6433

Email: jmfitzpatrick@cooley.com

Correspondent Name: JENNIFER FITZPATRICK

Address Line 1: C/O COOLEY LLP

Address Line 2: 4401 EASTGATE MALL

TRADEMARK

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Address Line 4: | SAN DIEGO, CALIFORNIA 92121 |
| ATTORNEY DOCKET NUMBER: | 300614-149 CAREDX |
| NAME OF SUBMITTER: | JENNIFER FITZPATRICK |
| SIGNATURE: | /JENNIFER FITZPATRICK/ |
| DATE SIGNED: | 06/27/2016 |
| Total Attachments: 7 source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page1.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page2.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page3.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page4.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page5.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page6.tif source=EWB - CareDx - Intellectual Property Security Agreement (executed) - 6.27.16#page7.tif | |

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This **INTELLECTUAL PROPERTY SECURITY AGREEMENT** is entered into as of June 27, 2016 by and between EAST WEST BANK ("**Bank**") and CAREDX, INC. ("**Grantor**").

RECITALS

A. Bank has agreed to make certain advances of money and to extend certain financial accommodations to Grantor (the "**Loans**") in the amounts and manner set forth in that certain Loan and Security Agreement by and between Bank and Grantor dated as of January 30, 2015 (as the same may be amended, modified or supplemented from time to time, the "**Loan Agreement**"; capitalized terms used herein are used as defined in the Loan Agreement). Bank is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Bank a security interest in certain Copyrights, Trademarks and Patents to secure the obligations of Grantor under the Loan Agreement.

B. Pursuant to the terms of the Loan Agreement, Grantor has granted to Bank a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Loan Agreement and all other agreements now existing or hereafter arising between Grantor and Bank, Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

To secure its obligations under the Loan Agreement and under any other agreement now existing or hereafter arising between Grantor and Bank, Grantor grants and pledges to Bank a security interest in all of Grantor's right, title and interest in, to and under its Intellectual Property Collateral (including without limitation those Copyrights, Patents and Trademarks listed on Exhibits A, B and C hereto), and including without limitation all proceeds thereof (such as, by way of example but not by way of limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof.

This security interest is granted in conjunction with the security interest granted to Bank under the Loan Agreement. The rights and remedies of Bank with respect to the security interest granted hereby are in addition to those set forth in the Loan Agreement and the other Loan Documents, and those which are now or hereafter available to Bank as a matter of law or equity. Each right, power and remedy of Bank provided for herein or in the Loan Agreement or any of the Loan Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Bank of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Loan Agreement or any of the other Loan Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Bank, of any or all other rights, powers or remedies.

Grantor represents and warrants that Exhibits A, B, and C attached hereto set forth any and all intellectual property rights in connection to which Grantor has registered or filed an application with either the United States Patent and Trademark Office or the United States Copyright Office, as applicable.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

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IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.


GRANTOR:

Address of Grantor:

3260 Bayshore Boulevard
Brisbane, CA 94005

Attn: Chief Executive Officer

CAREDX, INC.

By: 
Name: CHARLES CONSTANTI
Title: CHIEF FINANCIAL OFFICER

BANK:

Address of Bank:

2350 Mission College Blvd., Suite 988
Santa Clara, CA 95054

Attn: Linda LeBeau, Managing Director

EAST WEST BANK

By: _____
Name: _____
Title: _____

{Signature Page to Intellectual Property Security Agreement}

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

Address of Grantor:

3260 Bayshore Boulevard
Brisbane, CA 94005

Attn: Chief Executive Officer

CAREDX, INC.

By: _____
Name: _____
Title: _____

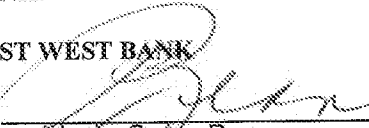
BANK:

Address of Bank:

2350 Mission College Blvd., Suite 988
Santa Clara, CA 95054

Attn: Linda LeBeau, Managing Director

EAST WEST BANK

By:  _____
Name: Linda S. Le Beau
Title: Managing Director, Life Sciences

[Signature Page to Intellectual Property Security Agreement]

EXHIBIT A

Copyrights

| <u>Description</u> | <u>Registration Number</u> | <u>Registration Date</u> |
|--------------------|--------------------------------|--------------------------|
| None. | | |

EXHIBIT B

Patents

| <u>Description</u> | <u>Patent / Application Number</u> | <u>Issue / Application Date</u> |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------|
| Methods and compositions for diagnosing or monitoring auto immune and chronic inflammatory diseases | 6,905,827 | 06/14/2005 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,026,121 | 04/11/2006 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,235,358 | 06/26/2007 |
| Methods and compositions for diagnosing or monitoring autoimmune and chronic inflammatory diseases | 7,579,148 | 08/25/2009 |
| Methods and compositions for diagnosis and monitoring auto immune and chronic inflammatory diseases | 7,604,936 | 10/20/2009 |
| Genes useful for diagnosing and monitoring inflammation related disorders | 7,645,575 | 01/12/2010 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,691,569 | 04/06/2010 |
| Methods and compositions for diagnosing and monitoring auto immune and chronic inflammatory diseases | 7,771,950 | 08/10/2010 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,785,797 | 08/31/2010 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,829,286 | 11/09/2010 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,879,556 | 02/01/2011 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,892,745 | 02/22/2011 |
| Methods and compositions for diagnosing and monitoring transplant rejection | 7,960,121 | 06/14/2011 |
| Methods and compositions for diagnosing and monitoring the status of transplant rejection and immune disorders | 7,993,832 | 08/09/2011 |
| Methods and compositions for diagnosing or monitoring autoimmune and chronic inflammatory diseases | 8,110,364 | 02/07/2012 |
| Methods for diagnosing and monitoring the status of systemic lupus erythematosus | 8,148,067 | 04/03/2012 |

| Description | Patent / Application Number | Issue / Application Date |
|-----------------------------------------------------------------------------|----------------------------------------|-------------------------------------|
| Methods of monitoring immunosuppressive therapies in a transplant recipient | 14/658,061 | 03/13/2015 |

EXHIBIT C

Trademarks

| <u>Description</u> | <u>Registration/ Serial Number</u> | <u>Registration/ Application Date</u> |
|-------------------------------------|----------------------------------------|-------------------------------------------|
| CAREDX | 4,884,670 | 01/12/2016 |
| CAREDX | 86/220,870 | 03/13/2014 |
| ALLOSURE | 86/428,517 | 10/20/2014 |
| RENAMAP | 86/425,845 | 10/16/2014 |
| RENASURE | 86/404,134 | 09/24/2014 |
| ALLOMAP | 3,143,352 | 09/12/2006 |
| ALLOMAP | 3,442,169 | 06/03/2008 |
| CAREDX | 3,896,426 | 12/28/2010 |
| XDX EXPRESSION DIAGNOSTICS & DESIGN | 3,199,533 | 01/16/2007 |
| XDX | 3,437,631 | 05/27/2008 |
| XDX | 3,160,957 | 10/17/2006 |