

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4334905

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	CANCER GENETICS, INC.	03/22/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	SILICON VALLEY BANK	
<b>Street Address:</b>	275 GROVE STREET	
<b>Internal Address:</b>	SUITE 2-200	
<b>City:</b>	NEWTON	
<b>State/Country:</b>	MASSACHUSETTS	
<b>Postal Code:</b>	02466	
<b>PROPERTY NUMBERS Total: 11</b>		
<b>Property Type</b>	<b>Number</b>	
Patent Number:	7585964	
Patent Number:	7964345	
Patent Number:	8557747	
Patent Number:	8580713	
Patent Number:	8716193	
Patent Number:	8603948	
Application Number:	14180814	
Patent Number:	9157129	
Patent Number:	8883414	
Patent Number:	8865882	
Application Number:	14938230	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(800)494-7512	
<i>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.</i>		
<b>Phone:</b>	202-370-4750	
<b>Email:</b>	ipteam@nationalcorp.com	
<b>Correspondent Name:</b>	JOANNA MCCALL	
<b>Address Line 1:</b>	1025 VERMONT AVE NW, SUITE 1130	
<b>Address Line 2:</b>	NATIONAL CORPORATE RESEARCH, LTD	

PATENT

<b>Address Line 4:</b> WASHINGTON, D.C. 20005	
<b>ATTORNEY DOCKET NUMBER:</b>	F169177
<b>NAME OF SUBMITTER:</b>	ANDREW NASH
<b>SIGNATURE:</b>	/Andrew Nash/
<b>DATE SIGNED:</b>	03/24/2017
<b>Total Attachments: 9</b> source=IPSA#page1.tif source=IPSA#page2.tif source=IPSA#page3.tif source=IPSA#page4.tif source=IPSA#page5.tif source=IPSA#page6.tif source=IPSA#page7.tif source=IPSA#page8.tif source=IPSA#page9.tif	

## INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this "**Agreement**") is entered into as of March 22, 2017, by and between **SILICON VALLEY BANK**, a California corporation, with a loan production office located at 275 Grove Street, Suite 2-200, Newton, Massachusetts 02466 ("**Bank**") and **CANCER GENETICS, INC.**, a Delaware corporation with its principal place of business located at 201 Route 17 North, 2nd Floor, Rutherford, New Jersey 07070 ("**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 Amended and Restated Loan and Security Agreement by and among Bank, Grantor and Gentriss, LLC dated as of the date hereof (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 its Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of Grantor to Bank.

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 Grantor's obligations to Bank, Grantor hereby represents, warrants, covenants and agrees as follows:

### AGREEMENT

1. Grant of Security Interest. To secure Grantor's obligations to 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 (all of which shall collectively be called the "**Intellectual Property Collateral**"), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "**Copyrights**");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "**Patents**");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "**Trademarks**");

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "**Mask Works**");

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Recordation. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this Agreement upon request by Bank.

3. Loan Documents. This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement, which is hereby incorporated by reference. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Bank with respect to the Intellectual Property Collateral are as provided by the Loan Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

4. Execution in Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

5. Successors and Assigns. This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

6. Governing Law. This Agreement and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement and the transactions contemplated hereby and thereby shall be governed by, and construed in accordance with, the laws of the United States and the State of New York without giving effect to any choice or conflict of law provision or rule (whether of the State of New York or any other jurisdiction).

[Signature page follows.]

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:

CANCER GENETICS, INC.

By: 

Title: COO & SUP Financer + Secretary

BANK:

SILICON VALLEY BANK

By: \_\_\_\_\_

Title: \_\_\_\_\_

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:

CANCER GENETICS, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

BANK:

SILICON VALLEY BANK

By: *Samuel K. H. H.*

Title: VP

EXHIBIT A

Copyrights

None.



EXHIBIT B

Patents

<u>Description</u>	<u>Registration/ Application Number</u>	<u>Registration/ Application Date</u>
Methods of Analyzing Chromosomal Translocations Using Fluorescence In Situ Hybridization (FISH)	US Patent No. 7,585,964	September 8, 2009
Methods of Analyzing Chromosomal Translocations Using Fluorescence In Situ Hybridization (FISH)	US Patent No. 7,964,345	June 21, 2011
Tool for Diagnosis and Prognosis of Mature B-Cell Neoplasms	US Patent No. 8,557,747	October 15, 2013
Tool for Diagnosis and Prognosis of Mature B-Cell Neoplasms	US Patent No. 8,580,713	November 12, 2013
Panel for the Detection and Differentiation of Renal Cortical Neoplasms	US Patent No. 8,716,193	May 6, 2014
Panel for the Detection and Differentiation of Renal Cortical Neoplasms	US Patent No. 8,603,948	December 10, 2013
Methods and Tools for the Diagnosis and Prognosis of Urogenital Cancers	US Application No. 14/180,814	February 14, 2014
Methods for Detecting Human Papilloma Virus-Associated Cancers	US Patent No. 9,157,129	October 13, 2015
Methods for Detecting Human Papilloma Virus-Associated Cancers	US Patent No. 8,883,414	November 11, 2014
Methods for Detecting Human Papilloma Virus-Associated Cancers	US Patent No. 8,865,882	October 21, 2014
Prognostic Methods and Systems for Chronic Lymphocytic Leukemia	US Application No. 14/938,230	November 11, 2015

## EXHIBIT C

### Trademarks

<u>Description</u>	<u>Registration/ Application Number</u>	<u>Registration/ Application Date</u>
CGI	3,993,858	July 12, 2011
CLL Complete	4,212,523	September 25, 2012
Empowering Personalized Cancer Treatment	3,964,780	May 24, 2011
FHACT	4,158,255	June 12, 2012
MATBA	4,084,491	January 10, 2012
Select One	4,511,347	April 8, 2014
Focus::NGS	5,141,000	February 14, 2017
UROGENRA	4,514,927	April 25, 2014
Because Everyone has a Different Response	3,970,898	May 31, 2011
KRAS is only half the equation	3,886,876	December 7, 2010
ResponseDX	4,376,661	July 30, 2013
The right therapy for each patient the first time	3,811,603	June 29, 2010
Focus::Renal	87363893	March 8, 2017
Focus::HERSite	87312867	January 26, 2017
Tissue of Origin	87130385	August 8, 2016
ResponseDX: Tissue of Origin	4,769,530	July 7, 2015
Response Genetics	4,769,389	July 7, 2015
ResponseDX: Melanoma	4,207,164	September 11, 2012
ResponseDX	4,035,760	October 4, 2011
ResponseDX: Gastric	4,154,436	June 5, 2012
ResponseDX: Lung	4,035,279	October 4, 2011
ResponseDX: Colon	4,067,404	December 6, 2011
Response Genetics	2,800,718	December 30, 2003
Design Only	2,800,637	December 30, 2003

EXHIBIT D

Mask Works

None.

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