

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4533256

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
DAVID ROOT	07/21/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE BROAD INSTITUTE, INC.
<b>Street Address:</b>	415 MAIN STREET
<b>City:</b>	CAMBRIDGE
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02142
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14409138
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(617)646-8646
<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>	617-646-8000
<b>Email:</b>	PATENTS_MARYANNET@WOLFGREENFIELD.COM
<b>Correspondent Name:</b>	WOLF, GREENFIELD & SACKS, P.C.
<b>Address Line 1:</b>	600 ATLANTIC AVENUE
<b>Address Line 2:</b>	MARIA A. TREVISAN
<b>Address Line 4:</b>	BOSTON, MASSACHUSETTS 02210
<b>ATTORNEY DOCKET NUMBER:</b>	B1195.70007US03 - BROAD
<b>NAME OF SUBMITTER:</b>	NICOLE MILLETTE LAPOMARDO
<b>SIGNATURE:</b>	/NICOLE MILLETTE LAPOMARDO/
<b>DATE SIGNED:</b>	08/02/2017
<b>Total Attachments: 2</b>	
source=B119570007US03-BROAD_ASSIGN-MAT#page1.tif	
source=B119570007US03-BROAD_ASSIGN-MAT#page2.tif	

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

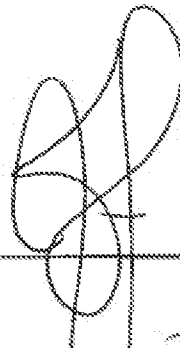
1. Sell, assign and transfer to The Broad Institute, Inc., a Massachusetts Corporation having a place of business at 415 Main Street, Cambridge, Massachusetts 02142, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on December 18, 2014 under No. 14/409,138, bearing Attorney Docket No. B1195.70007US03, and entitled DIAGNOSTIC AND TREATMENT METHODS IN SUBJECTS HAVING OR AT RISK OF DEVELOPING RESISTANCE TO CANCER THERAPY, and in and to the application and all corresponding non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea;
2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
3. Request the Director of the United States Patent and Trademark Office to issue the Letters Patent to the Assignee;
4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

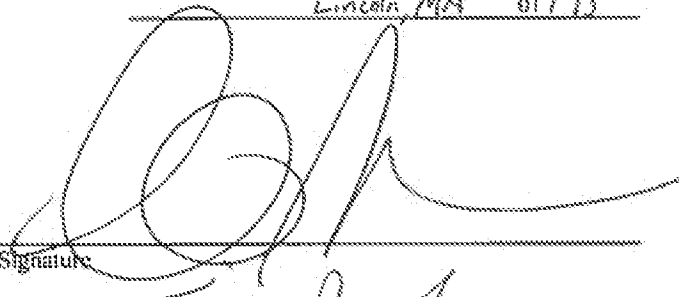
7/21/2017  
Date

David E. Root  
Inventor: David Root  
Address: 17 Newell Road  
Brookline, Massachusetts 02446  
Citizenship: US

Witness:  
7/21/2017  
Date

  
Signature  
Name: Jasmin Felsch  
Address: 142 Tinker Rd  
Lincoln, MA 01773

Witness:  
7/21/17  
Date

  
Signature  
Name: Jacob Burke  
Address: 50 Greengreen St #114  
Boston, MA 02130