505393119 03/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5439913

| SUBMISSION TYPE: | | NEW ASSIGNMENT | | |
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| NATURE OF CONVEYANCE: | | ASSIGNMENT | | |
| CONVEYING PARTY D | ΑΤΑ | | | |
| | | Name | Execution Date | |
| ADAM R. ABATE | | | 04/04/2010 | |
| JEREMY AGRESTI | | | 05/23/2010 | |
| TONY HUNG | | | 04/06/2010 | |
| MICHAEL P. WEINER | | | 12/22/2009 | |
| DAVID A. WEITZ | | | 04/05/2010 | |
| RECEIVING PARTY DA | ТА | | | |
| Name: | Presider | President and Fellows of Harvard College | | |
| Street Address: | 17 Quine | cy Street | | |
| City: | Cambric | dge | | |
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| Postal Code: | 02138 | | | |
| | Total: 1 | | | |
| PROPERTY NUMBERS Property Type | Total: 1 | Number | | |
| PROPERTY NUMBERS Property Type Application Number: | | Number 15670885 | | |
| Property Type | 1 | | | |
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| Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> | ATA (e sent to provided; | 15670885 617)495-9568 the e-mail address first; if that is unsu | | |
| Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> Phone: Email: | ATA (e sent to provided; (s | 617)495-9568 the e-mail address first; if that is unsuc ; if that is unsuccessful, it will be sent v 617) 495-3067 siobhan_murphy@harvard.edu | | |
| Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: | ATA (e sent to provided; (s | 617)495-9568 <i>the e-mail address first; if that is unsuc</i> <i>; if that is unsuccessful, it will be sent v</i> 617) 495-3067 siobhan_murphy@harvard.edu 〈AREN SINCLAIR | | |
| Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will bu using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: | ATA (e sent to provided; (s h 1 | 617)495-9568 <i>the e-mail address first; if that is unsuc</i> <i>; if that is unsuccessful, it will be sent v</i> 617) 495-3067 siobhan_murphy@harvard.edu (AREN SINCLAIR 1350 MASSACHUSETTS AVE | via US Mail. | |
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Total Attachments: 12

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| source=PCTUS0813912_Assignment_Inventors_HU_3024#page12.tif |

ASSIGNMENT

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

Adam R. Abate, Jeremy Agresti, Tony Hung, Michael P. Weiner, and David A. Weitz

(hereafter "Assignors") hereby assign, sell, and transfer to:

President and Fellows of Harvard College 17 Quincy Street, Cambridge, Massachusetts 02138

(hereafter "Assignee") its successors and assigns, Assignors' entire right, title and interest throughout the world in and to any and all inventions and improvements for:

Systems and Methods for Nucleic Acid Sequencing

described in U.S. Patent Application No. ________ and International Patent Application No. PCT/US08/013912 filed December 19, 2008 and Provisional Patent Application Nos. 61/008,862 filed 12/21/2007 and 61/098,710 filed 09/19/2008; and in and to the aforesaid application(s), in any form or embodiment thereof, and in and to any application filed in this and any foreign country based thereon, including the right to file said applications and claim priority under the provisions of any international convention or treaty; also the entire right, title and interest throughout the world in and to any and all patents or reissues or extensions thereof to be obtained in this or any foreign country upon said invention or inventions and any divisional, continuation, continuation-in-part or substitute applications which may be filed upon said invention or inventions in this or any foreign country; and authorize and request the issuing authority to issue any and all patents on said application or applications to said Assignee or its successors and assigns.

Assignors hereby warrant that they have full right to convey their entire right, title and interest, both legal and equitable, in and to said inventions, free from all prior assignments, agreements, licenses, mortgages, security interests, or other encumbrances whatsoever; and

Assignors further agree, without further payment or compensation by said Assignee or its successors and assigns, to communicate to said Assignee, its representatives or agents or its successors and assigns, any facts relating to said invention or inventions including evidence for interference purposes or for other legal proceedings, whenever requested; testify in any interference or other legal proceedings whenever requested; execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and generally do everything possible to aid said Assignee, its representatives or agents, or its successors or assigns to secure, obtain and enforce proper patent protection for said invention or inventions in this and any foreign country.

The undersigned hereby authorizes assignee or assignee's representative to insert into this Assignment said application serial number(s) and filing date(s) if not known at the time of execution of this assignment.

| Date: | |
|-------|--------------------|
| | Adam R. Abate |
| Date: | Witness |
| | Witness Print Name |
| Date: | |
| | Jeremy Agresti |
| Date: | Witness |
| | Witness Print Name |

Date: 4/6/10

Date:

Tony Hung Witness Print N

Date: _____

Date:

Michael P. Weiner

Witness

Witness Print Name

Date: 4/5/10

Date:

David A 'eitz

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itness Print Name

PATENT **REEL: 048696 FRAME: 0611**

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Assignors further agree, without further payment or compensation by said Assignee or its successors and assigns, to communicate to said Assignee, its representatives or agents or its successors and assigns, any facts relating to said invention or inventions including evidence for interference purposes or for other legal proceedings, whenever requested; testify in any interference or other legal proceedings whenever requested; execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and generally do everything possible to aid said Assignee,

PATENT REEL: 048696 FRAME: 0612

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its representatives or agents, or its successors or assigns to secure, obtain and enforce proper patent protection for said invention or inventions in this and any foreign country.

The undersigned hereby authorizes assignee or assignee's representative to insert into this Assignment said application serial number(s) and filing date(s) if not known at the time of execution of this assignment.

414/10 Date:

Date:

Adam R. Abate

Witness

Witness Print Name

Date: _____

Jeremy Agresti

Date:

Witness

Witness Print Name

Date: _____

Tony Hung

Date: _____

Witness

Witness Print Name

Date: _____

Date: _____

Michael P. Weiner

Witness

Witness Print Name

Date: _____

David A. Weitz

Date:

Witness

Witness Print Name

To:16174959568

Patent Assignment HU Case 3024 Appln. No(s): 61/008,862; 61/098,710; PCT/US08/013912

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> PATENT REEL: 048696 FRAME: 0615

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Date:

Date: _____

Adam R. Abate

Witness

Witness Print Name

Date: _____

Date: _____

Witness

Jeremy Agresti

Witness Print Name

PATENT REEL: 048696 FRAME: 0616

| Patent Assignment | |
|---|---|
| HU Case 3024 | |
| Appin. No(s): 61/008,862; 61/098,710; PCT/US08/01391; | 2 |

Date: _____

Tony Hung

Date: _____

Witness

Witness Print Name

Date: 12/22/09Date: 12/22/09

< Michael P. Weiner

Witness

Witness Print Name

Date:

David A. Weitz

Date:

Witness

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Witness Print Name

PATENT REEL: 048696 FRAME: 0617

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PATENT REEL: 048696 FRAME: 0618

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Date: _____

Adam R. Abate

Date: _____

Witness

Witness Print Name

Date: <u>5-28-201</u>0

Date: 5/28 2010

Ulas

Jeremy Agresti

Witness

Zach Serber

Witness Print Name

Date: _____

12**3**4

Tony Hung

Date: _____

Witness

Witness Print Name

Michael P. Weiner

Date:

Date: _____

Witness

Witness Print Name

Date: _____

David A. Weitz

Date: _____

Witness

Witness Print Name

PATENT REEL: 048696 FRAME: 0620

RECORDED: 03/26/2019