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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5330241

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| SUBMISSION TYPE: | CORRECTIVE ASSIGNMENT |
| NATURE OF CONVEYANCE: | Corrective Assignment to correct the TITLE OF THE APPLICATION IN THE ASSIGNMENT previously recorded on Reel 046438 Frame 0124. Assignor(s) hereby confirms the ASSIGNMENT. |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| JONATHAN GOOTENBERG | 07/19/2018 |
| RECEIVING PARTY DATA | |
| Name: | PRESIDENT AND FELLOWS OF HARVARD COLLEGE |
| Street Address: | 17 QUINCY STREET |
| City: | CAMBRIDGE |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 02138 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 15922879 |
| CORRESPONDENCE DATA | |
| Fax Number: | (240)359-4879 |
| <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> | |
| Phone: | 9122574864 |
| Email: | BROD.Assignments@jmi-iplaw.com |
| Correspondent Name: | F. BRENT NIX, ESQ. |
| Address Line 1: | JOHNSON, MARCOU & ISAACS, LLC |
| Address Line 2: | P.O. BOX 691 |
| Address Line 4: | HOSCHTON, GEORGIA 30548 |
| ATTORNEY DOCKET NUMBER: | BROD-2032 |
| NAME OF SUBMITTER: | SUSAN FRATTURA |
| SIGNATURE: | /Susan Frattura/ |
| DATE SIGNED: | 01/17/2019 |
| Total Attachments: 3 | |
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| source=BI_10152_signed_Corrective_Gootenberg_Assignment_BROD-2032#page2.tif | |
| source=BI_10152_signed_Corrective_Gootenberg_Assignment_BROD-2032#page3.tif | |

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5063542

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| JONATHAN GOOTENBERG | 07/19/2018 |
| RECEIVING PARTY DATA | |
| Name: | PRESIDENT AND FELLOWS OF HARVARD COLLEGE |
| Street Address: | 17 QUINCY STREET |
| City: | CAMBRIDGE |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 02138 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 15922879 |
| CORRESPONDENCE DATA | |
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| Phone: | 9122574864 |
| Email: | DOCKETING@JMI-IPLAW.COM |
| Correspondent Name: | F. BRENT NIX, ESQ. |
| Address Line 1: | PO BOX 691 |
| Address Line 2: | JOHNSON, MARCOU & ISAACS, LLC |
| Address Line 4: | HOSCHTON, GEORGIA 30548 |
| ATTORNEY DOCKET NUMBER: | BROD-2032 |
| NAME OF SUBMITTER: | GWEN B. ROSS |
| SIGNATURE: | /GWEN B. ROSS/ |
| DATE SIGNED: | 07/24/2018 |
| Total Attachments: 2 | |
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| source=BI_10152_Signed_Assignment_Gootenberg_BROD_2032#page2.tif | |

ASSIGNMENT

WHEREAS, I, **JONATHAN GOOTENBERG**, having a correspondence address at c/o 17 Quincy Street, Cambridge, Massachusetts 02138, have invented with others certain inventions and improvements disclosed in a patent application entitled "**CRISPR EFFECTOR SYSTEM BASED DIAGNOSTICS**," filed in the United States Patent and Trademark Office as follows:

356
12/17/18

| Application No. | Filing Date |
|-----------------|----------------|
| 15/922,879 | March 15, 2018 |

; and

WHEREAS, the **PRESIDENT AND FELLOWS OF HARVARD COLLEGE**, having a principal place of business at 17 Quincy Street, Cambridge, Massachusetts 02138, is desirous of acquiring an interest in the same; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which I hereby acknowledge, I, **JONATHAN GOOTENBERG**, *by these presents, do sell, assign, and transfer unto said Assignee, PRESIDENT AND FELLOWS OF HARVARD COLLEGE*, my full, exclusive, and entire right, title, and interest in and to said application, in and to any divisions, continuations, reexaminations, and reissues thereof, and in and to all inventions and improvements disclosed and described in said applications, preparatory to obtaining Letters Patent of the United States therefor; and we hereby request the Director of the U.S. Patent and Trademark Office to issue any and all Letters Patent of the United States resulting from said applications, or from a division, continuation, reexamination, or reissue thereof, to **PRESIDENT AND FELLOWS OF HARVARD COLLEGE**, for their interest and for the use and benefit of **PRESIDENT AND FELLOWS OF HARVARD COLLEGE** as assignee, and their assigns and legal representatives;

For the same consideration, I, by these presents, do sell, assign, and transfer to the **PRESIDENT AND FELLOWS OF HARVARD COLLEGE**, my full, exclusive, and entire right, title, and interest in and to any foreign application or applications corresponding to said

Assignment
U.S. Patent Application No. 15/922,879
Gootenberg

application, in whole or in part, in countries other than the United States, in and to any Letters Patent and similar protective rights granted on said foreign applications, and in and to the right to claim any applicable priority rights arising from or required for said foreign applications under the terms of any applicable conventions, treaties, statutes, or regulations; said foreign applications to be filed and issued in the name of **PRESIDENT AND FELLOWS OF HARVARD COLLEGE**, or their designees insofar as permitted by applicable law;

AND, for the same consideration, I agree to sign all lawful papers, execute all divisions, continuations, reexaminations, reissues, and other applications, make all assignments and rightful oaths, and generally do everything possible to aid the **PRESIDENT AND FELLOWS OF HARVARD COLLEGE**, their successors, assigns, and nominees to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

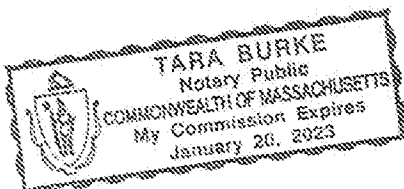
In testimony whereof, I hereunto set my hand and seal on the date indicated below.

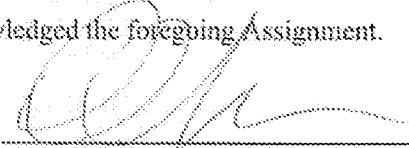


JONATHAN GOOTENBERG 7/19/18
DATE

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF MIDDLESEX

Before me, a Notary Public in and for the aforementioned state, on this 19
day of July, 2018, personally appeared **JONATHAN GOOTENBERG**,
who, being duly sworn, signed and acknowledged the foregoing Assignment.





NOTARY PUBLIC

My Commission Expires: 1/20/23