

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	OMAR ABUDAYYEH	04/25/2018
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<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	15917546
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<b>ATTORNEY DOCKET NUMBER:</b>	BROD-0845US	
<b>NAME OF SUBMITTER:</b>	COLLEEN F. SULLIVAN	
<b>SIGNATURE:</b>	/Colleen F. Sullivan/	
<b>DATE SIGNED:</b>	09/28/2018	
<b>Total Attachments: 3</b>		
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## ASSIGNMENT

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WHEREAS, we, **OMAR ABUDAYYEH**, having a correspondence address of c/o 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, and **JAMES JOSEPH COLLINS**, having a correspondence address of c/o 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, have invented with another certain inventions and improvements disclosed in International PCT Patent Application No. PCT/US2017/065477 entitled "**CRISPR EFFECTOR SYSTEM BASED DIAGNOSTICS**," filed on December 8, 2017 with the United States Patent and Trademark Office as Receiving Office; and

WHEREAS, the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, having a principal place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, is desirous of acquiring an interest in the same;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which we hereby acknowledge, we, **OMAR ABUDAYYEH** and **JAMES JOSEPH COLLINS**, by these presents, do sell, assign, and transfer to the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, our full, exclusive, and entire right, title, and interest in and to said applications, 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 the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, for its interest and for the use and benefit of the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, as assignee, and its assigns and legal representatives;

For the same consideration, we, by these presents, do sell, assign, and transfer to the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, our full, exclusive, and entire right, title, and interest in and to any foreign application or applications corresponding to said applications, 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 the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, or its designees insofar as permitted by applicable law;

AND, for the same consideration, we agree to sign all lawful papers, execute all division, continuing, reexamination, reissue, and other applications, make all assignments and rightful oaths, and generally do everything possible to aid the **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, its successors, assigns, and nominees to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

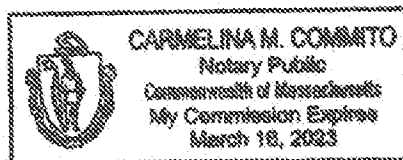
In testimony whereof, I hereunto set my hand and seal the day and year opposite my respective signature.

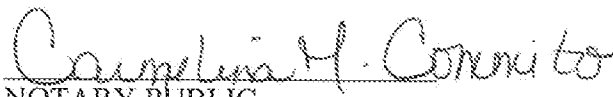
  
**OMAR ABUDAYYEH**

COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

Before me, a Notary Public in and for the aforementioned state, on this 25<sup>th</sup> day of April, 2018, personally appeared **OMAR ABUDAYYEH**, who, being duly sworn, signed and acknowledged the foregoing Assignment.

(SEAL)



  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_

[SIGNATURES CONTINUED ON NEXT PAGE]

\_\_\_\_\_  
**JAMES JOSEPH COLLINS**

COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

Before me, a Notary Public in and for the aforementioned state, on this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_, personally appeared **JAMES JOSEPH COLLINS**, who,  
being duly sworn, signed and acknowledged the foregoing Assignment.

\_\_\_\_\_  
**NOTARY PUBLIC**

My Commission Expires: \_\_\_\_\_

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