

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT4046297

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
J. Keith Joung	07/26/2016
Benjamin Kleinstiver	07/26/2016
RECEIVING PARTY DATA	
Name:	The General Hospital Corporation
Street Address:	55 Fruit Street
City:	Boston
State/Country:	MASSACHUSETTS
Postal Code:	02114
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15060448
CORRESPONDENCE DATA	
Fax Number:	(877)769-7945
<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:	(617) 542-5070
Email:	apsi@fr.com
Correspondent Name:	JANICE K. DEYOUNG
Address Line 1:	FISH & RICHARDSON P.C.
Address Line 2:	P.O.BOX 1022
Address Line 4:	MINNEAPOLIS, MINNESOTA 55440-1022
ATTORNEY DOCKET NUMBER:	40174-0014002
NAME OF SUBMITTER:	CHRISTINE M. GRACE
SIGNATURE:	/Christine M. Grace/
DATE SIGNED:	09/11/2016
Total Attachments: 4	
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ASSIGNMENT

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, J. KEITH JOUNG, and BENJAMIN KLEINSTIVER, each individually assign to THE GENERAL HOSPITAL CORPORATION, a corporation formed under the laws of Massachusetts and having a principal place of business at 55 Fruit Street, Boston, MA 02114, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a patent application that names us as inventors, is titled "ENGINEERED CRISPR-CAS9 NUCLEASES WITH ALTERED PAM SPECIFICITY," and was filed in the United States Patent and Trademark Office on March 3, 2016, as application 15/060,448 (the "Application").

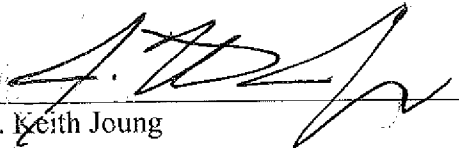
This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and

documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.


J. Keith Joung

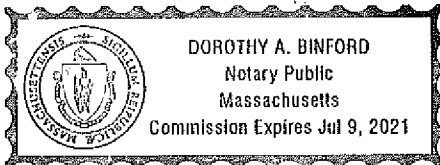
DATE: 7/26/16

The Commonwealth of Massachusetts

Suffolk ss.



On this 26th day of July, 2016, before me, the undersigned notary public, personally appeared J. KEITH JOUNG, proved to me through satisfactory evidence of identification, which were MA DRIVER'S LICENCE, to be the person(s) whose name(s) is/are signed on the preceding or attached document, and acknowledged to me that JKJ signed it voluntarily for its stated purpose.



Dorothy A Binford
Notary Public

Ben Kleinstiver
Benjamin Kleinstiver

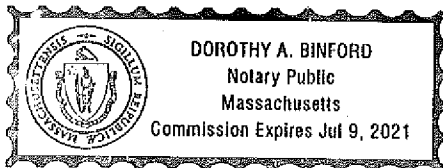
DATE: July 26, 2016

The Commonwealth of Massachusetts

Suffolk ss.



On this 26th day of July, 2016 before me, the undersigned notary public, personally appeared BENJAMIN KLEINSTIVER proved to me through satisfactory evidence of identification, which were MA DRIVERS LICENSE, to be the person(s) whose name(s) is/are signed on the preceding or attached document, and acknowledged to me that BK signed it voluntarily for its stated purpose.



Dorothy A. Binford
Notary Public

The Assignee hereby acknowledges and accepts the foregoing assignment.

Assignee: THE GENERAL HOSPITAL CORPORATION

Signature: [Signature] Date: 8/10/16

Name: Bruce Tedeschi Bruce W. Tedeschi, PhD, JD

Title: Director of IP Director, Innovation
The General Hospital Corporation

The Commonwealth of Massachusetts

[Signature] ss.



On this 10th day of August, 2016 before me, the undersigned notary public, personally appeared Bruce W. Tedeschi, proved to me through satisfactory evidence of identification, which were RI Driver's License, to be the person(s) whose name(s) is/are signed on the preceding or attached document, and acknowledged to me that HE signed it voluntarily for its stated purpose.

[Signature]
Notary Public

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