

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

Assignment ID: PATI903180

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	LICENSE
CONVEYING PARTY DATA	
Name	Execution Date
BROAD INSTITUTE, INC.	02/16/2023
RECEIVING PARTY DATA	
Company Name:	National Institutes of Health (NIH), U.S. Dept. of Health and Human Services (DHHS), U.S. Government
Street Address:	FIRM-IP
City:	Bethesda
State/Country:	MARYLAND
Postal Code:	20892
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16592744
CORRESPONDENCE DATA	
Fax Number:	3014800272
<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:	(301)435-1986
Email:	edison@nih.gov
Correspondent Name:	FIRM-IP Director
Address Line 1:	FIRM-IP
Address Line 4:	Bethesda, MARYLAND 20892
NAME OF SUBMITTER:	Carolyn Mosby
SIGNATURE:	/Carolyn Mosby/
DATE SIGNED:	03/21/2025
Total Attachments: 1 source=16592744#page1.tiff	

Patent Docket Number: BI-2014/005.16/592,744

Invention Report Number: 10021177-14-0020

License to the United States Government

*Generated on 02/15/2023 with iEdison**Sign and submit the executed document to the appropriate funding agency (e.g. upload in iEdison).*

Title of Invention: SYSTEMS, METHODS AND COMPOSITIONS FOR SEQUENCE MANIPULATION WITH OPTIMIZED FUNCTIONAL CRISPR-CAS SYSTEMS

Inventor(s): Feng Zhang, Mark Brigham, Silvana Konermann, Fei Ran, Alexandro Trevino, Patrick Hsu, Chie-yu Lin, Osamu Nureki, Hiroshi Nishimasu, Ryuichiro Ishitani, Silvana KONERMANN, Alexandro TREVINO, Mark BRIGHAM, Fei RAN, Patrick HSU, Chie-yu LIN, Osamu NUREKI, Hiroshi NISHIMASU, Ryuichiro ISHITANI, Feng ZHANG

U.S. Filing/Issue Date: 10/03/2019

Patent or Application Serial No.: 16/592,744

Grant/Contract Number(s): MH100706

Foreign Applications filed/intended in (countries): _____

The invention identified above is a Subject Invention under **35 U.S.C. 200, et seq.**, and the Standard Patent Rights clause at **37 CFR 401.14, FAR 52.227-11** or **FAR 52.227-12** (if applicable) which are included among the terms of the above identified grant or contract award from the United States Government. This document is confirmatory of:

1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations that are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application.

Signed this 16th day of February, 20 23.

By Christine O'Day
(Institutional Business Official)

DocuSigned by:
Christine O'Day
826F5D08F4424CB...
(Signature)

Title Associate Director, Intellectual Property

For BROAD INSTITUTE, INC.
(Grantee/Contractor Organization)

At 415 MAIN STREET
(Business Address)

CAMBRIDGE MA 02142
(City/State/Zipcode)

RECORDED: 03/21/2025**PATENT**
REEL: 070588 FRAME: 0838