505682207 09/20/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5729015

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAVID R. LIU	08/11/2015

RECEIVING PARTY DATA

Name:	HOWARD HUGHES MEDICAL INSTITUTE	
Street Address:	4000 JONES BRIDGE ROAD	
City:	CHEVY CHASE	
State/Country:	MARYLAND	
Postal Code:	20815	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16521371

CORRESPONDENCE DATA

Fax Number: (617)495-9568

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.

Phone: (617) 495-3067

Email: siobhan murphy@harvard.edu

Correspondent Name: KAREN SINCLAIR

Address Line 1: 1350 MASSACHUSETTS AVE

Address Line 2: HARVARD UNIVERSITY, OFFICE OF TECH. DEV.

Address Line 4: CAMBRIDGE, MASSACHUSETTS 02138

ATTORNEY DOCKET NUMBER:	5981
NAME OF SUBMITTER:	KAREN SINCLAIR
SIGNATURE:	/K.S./
DATE SIGNED:	09/20/2019

Total Attachments: 4

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> **PATENT** REEL: 050440 FRAME: 0492

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August 25, 2015

David Liu, PhD
Howard Hughes Medical Institute
Harvard University
Department of Chemistry and Chemical Biology
12 Oxford Street
Cambridge, MA 02138

Dear Dr. Liu:

I have received the executed form assigning your rights in the invention entitled "Directed Evolution of Site-Specific Recombinases for Targeted Integration into Unmodified Human Cells," which is set forth on the invention disclosure dated July 22, 2015 (the "Invention"). HHMI has adopted the practice of appointing you as HHMI's agent for the purpose of assigning its rights in the Invention to President and Fellows of Harvard College ("Institution"), as required under the collaborative arrangement between HHMI and Institution. Enclosed with this letter is an executed document appointing you as HHMI's agent for this purpose. I have sent the original assignment(s), this letter and its enclosure to Denlyn K. Atherton at Institution.

As you are probably aware, you will be asked to execute an assignment of rights to Institution in the event a patent application is filed with respect to the Invention. To ensure that HHMI's rights are properly assigned to Institution, it is important that you have the enclosed executed document with you when you execute that assignment and that, after your signature, you write in "for himself and as agent for the Howard Hughes Medical Institute." If you have any questions at all about this procedure or your role in it, please contact me.

Sincerely,

Marina Kitzmiller

Enclosure

cc: Denlyn K. Atherton

Marina Ketzaden

Marina Kitzmiller Technology Transfer Coordinator Office of the General Counsel 4000 Jones Bridge Road Chevy Chase, Maryland 20815-6789 301,215.8836 • mkitzmil@hhmi.org

APPOINTMENT OF INVESTIGATOR AS AGENT

Appointment by the Howard Hughes Medical Institute ("HHMI") of David Liu, PhD, an employee of HHMI, as its agent for the purpose of assigning certain rights to Harvard College, Faculty of Arts and Sciences ("Institution").

WHEREAS, HHMI and Institution collaborate in the active conduct of medical research pursuant to an Agreement between them dated as of December 1, 2013 (the "Agreement");

WHEREAS, pursuant to the Agreement, HHMI has agreed to assign to Institution HHMI's rights in Subject Property (as defined in the Agreement) in accordance with and subject to the conditions of the Agreement;

WHEREAS, research conducted pursuant to the Agreement by David Liu, PhD while employed by HHMI at Institution has resulted in the invention of a certain Subject Property entitled "Directed Evolution of Site-Specific Recombinases for Targeted Integration into Unmodified Human Cells," which is the subject of a patent application entitled "Evolution of Site-Specific Recombinases" filed in the U.S. Patent and Trademark Office on July 22, 2015 with Serial Number 62/195,739 (the "Invention"), and the Invention is a Subject Property; and

WHEREAS, HHMI wishes David Liu, PhD to act as its agent for the purpose of assigning to Institution the rights HHMI has in the Invention by reason of the research program conducted at Institution.

NOW THEREFORE, HHMI hereby appoints David Liu, PhD as its agent for the purpose of assigning the rights HHMI has or may acquire in the Invention to Institution in accordance with and subject to the conditions of the Agreement.

Executed: August 25, 2015

HOWARD HUGHES MEDICAL INSTITUTE

By:

Erin K. O'Shea, PhD Vice President and Chief Scientific Officer

ATTESTED:

Heidi E. Henning

Vice President and General Counsel

HU 5981 HHMI 06056

CONFIRMATION OF ASSIGNMENT

Confirmation of Assignment made	_ 8,	111	, 2015, by David R. Liu
PhD ("Inventor") to the Howard Hughes Medical Ir	istitutė́	, a De	laware corporation ("HHMI").

Recitals

WHEREAS, Inventor is an employee of HHMI and, as a condition of his employment, has signed the Intellectual Property Assignment Agreement (the "Intellectual Property Agreement");

WHEREAS, pursuant to the Intellectual Property Agreement, Inventor (a) assigned to HHMI all rights he had in any intellectual property resulting from research by HHMI employees, alone or with others, whether or not patentable or copyrightable, and whether funded in whole or in part by HHMI (each a "Subject Property") and (b) agreed to execute any agreements that may be desired by HHMI in connection with such assignment;

WHEREAS, Inventor has, alone or with others invented "Directed Evolution of Site-Specific Recombinases for Targeted Integration into Unmodified Human Cells" which may be the subject of a patent application (the "Invention"), and the Invention is a Subject Property; and

WHEREAS, Inventor seeks to confirm the assignment of his interest in the Invention to HHMI, and HHMI desires the execution of a confirmatory assignment of all of Inventor's right, title, and interest in the Invention.

NOW, THEREFORE, in consideration of the promises contained in and the acts performed and to be performed pursuant to the Intellectual Property Agreement and of other good and valuable consideration, the receipt of which is hereby acknowledged by Inventor, Inventor agrees as follows:

- 1. <u>Assignment</u>. Inventor hereby confirms the assignment to HHMI of his entire right, title, and interest in the Invention; any United States patent applications and all corresponding foreign patent applications which are directed to the Invention including, without limitation, the patent application entitled "Evolution of Site-Specific Recombinases" filed in the United States Patent and Trademark Office on July 22, 2015 with Serial Number 62/195,739 and any and all patents issued therefrom; all United States or foreign division and continuation applications based on any of the foregoing, and any and all patents issued therefrom; and all claims which are directed to the Invention and which may be contained in continuation-in-part applications or in patents which issue therefrom.
- 2. <u>Cooperation</u>. Inventor further confirms that Inventor agreed to execute upon request such further confirmatory assignments, documents, and other instruments as may be requested by HHMI in connection with the Invention and to assist HHMI (or others at the direction of HHMI) in applying for, obtaining, and enforcing patents, copyrights, or other rights in the United States and in any foreign country with respect to the Invention.

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3. <u>Parties</u> . The terms and provisions of the Assignment shall inure to the benefit of HHMI and its successors and assigns and shall be binding on the Inventor and his heirs, personal representatives, successors and assigns.
4. <u>Warranty</u> . Inventor warrants and represents that he has not entered into any assignment, contract, or understanding in conflict herewith.

Inventor:

David R. Liu, PhD

Witness:

MARKOVIC Date: 8/11/15

Witness:

HU 5981 HHMI 06056

> **PATENT** REEL: 050440 FRAME: 0496

RECORDED: 09/20/2019