501948854 06/08/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
David R. Liu	03/05/2010

RECEIVING PARTY DATA

Name:	Howard Hughes Medical Institute	
Street Address:	4000 Jones Bridge Road	
City:	Chevy Chase	
State/Country:	MARYLAND	
Postal Code:	20815-6789	

PROPERTY NUMBERS Total: 2

Property Type	Number
PCT Number:	US1002732
Application Number:	13505872

CORRESPONDENCE DATA

Fax Number: (617)495-9568 Phone: (617) 495-3058

Email: denlyn_atherton@harvard.edu

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US

Mail.

Correspondent Name: Anne Craig

Address Line 1: 1350 Massachusetts Ave

Address Line 2: Harvard University, Office of Tech. Dev. Address Line 4: Cambridge, MASSACHUSETTS 02138

ATTORNEY DOCKET NUMBER:	3580 US PCT HHMI
NAME OF SUBMITTER:	Anne I. Craig

Total Attachments: 4

source=3580 HHMI Assignment and Agent Executed#page1.tif source=3580 HHMI Assignment and Agent Executed#page2.tif source=3580 HHMI Assignment and Agent Executed#page3.tif source=3580 HHMI Assignment and Agent Executed#page4.tif

PATENT REEL: 028342 FRAME: 0428 OF \$80.00 US1002/32

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March 8, 2010

David R. Liu, PhD Investigator 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 "Reactivity-Dependent PCR and Interaction-Dependent PCR," which is set forth on the invention disclosure dated September 21, 2009 (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 am sending a copy of the 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,

Sue S. Ohata

Manager of Intellectual Property

Enclosure

cc:

Ms. Denlyn K. Atherton

APPOINTMENT OF INVESTIGATOR AS AGENT

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

WHEREAS, HHMI and Institution collaborate in the active conduct of medical research pursuant to an Agreement between them dated as of April 14, 2003 (the "Agreement");

WHEREAS, pursuant to the Agreement, HHMI has agreed to assign to Institution HHMI's rights with respect to inventions, discoveries, improvements, and other intellectual property, whether patentable or copyrightable (each a "Subject Property"), conceived or reduced to practice in the course of the research program conducted under the Agreement by employees of HHMI;

WHEREAS, research conducted pursuant to the Agreement by David R. Liu, PhD while employed by HHMI at Institution has resulted in the invention of a certain Subject Property entitled "Reactivity-Dependent PCR and Interaction-Dependent PCR," which is the subject of a patent application entitled "Reactivity-Dependent PCR" filed in the U.S. Patent and Trademark Office on November 4, 2009 with Serial Number 61/257,983 (the "Invention"), and the Invention is a Subject Property; and

WHEREAS, HHMI wishes David R. 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 R. Liu, PhD as its agent for the purpose of assigning the rights HHMI has or may acquire in the Invention by reason of the research program conducted at Institution to Institution in accordance with and subject to the conditions of the Agreement.

Executed: March 8, 2010

HOWARD HUGHES MEDICAL INSTITUTE

By:

Inch E. Dixon.

Vice President and Chief Scientific Officer

ATTESTED:

Craig A Alexander

Vice President and General Counsel

Harvard 3580 HHMI 04452

ASSIGNMENT

Assignment made MARCH 3 (1), 2010, by David R. Liu, PhD ("Inventor") to the Howard Hughes Medical Institute, a Delaware corporation ("HHMI").

Recitals

WHEREAS, Inventor is an employee of HHMI and, as a condition of his employment, has signed the Agreement appended to HHMI's Policy on Intellectual Property (the "Intellectual Property Agreement");

WHEREAS, pursuant to the Intellectual Property Agreement, Inventor has agreed (a) to assign to HHMI all rights he may acquire in any invention, discovery, improvement, or other intellectual property, whether or not patentable or copyrightable, developed directly or indirectly as a result of a program of research financed by HHMI funds or funds under the control of HHMI (each a "Subject Property") and (b) to execute any agreements that may be desired by HHMI in connection with such assignment;

WHEREAS, Inventor has, alone or with others invented "Reactivity-Dependent PCR and Interaction-Dependent PCR" which may be the subject of a patent application (the "Invention"), and the Invention is a Subject Property; and

WHEREAS, Inventor seeks to make a formal assignment of his interest in the Invention to HHMI, and HHMI desires the execution of a formal 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 assigns to HHMI his entire right, title, and interest in the Invention; any United State patent applications and all corresponding foreign patent applications which are directed to the Invention (including, without limitation, the patent application entitled "Reactivity-Dependent PCR" filed in the United States Patent and Trademark Office on November 4, 2009 with Serial Number 61/257,983), 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 agrees to execute upon request such further assignments, documents, and other instruments as may be necessary or desirable to assign Inventor's entire right, title and interest in the Invention to HHMI 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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<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 and assigns. 4. Warranty. Inventor warrants and represents that he has not entered into any assignment, contract, or understanding in conflict herewith, and that there is no other person or entity whose consent is required in order for the Inventor to make the assignment contained herein. Inventor: David R. Liu, PhD Commonwealth of Massachusetts County of Middlesen Then personally appeared before me the above-named David R. Liu, PhD and acknowledged that he executed the foregoing instrument in his authorized capacity this 3 day of MARCH , 2010 Notary Public (SEAL)

Harvard 3580 HHMI 04452 JOHN L. RANDAZZO

NOTARY PUBLIC
My Commission Expires April 30, 2010

My Commission Expires:

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