

# PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
<b>CONVEYING PARTY DATA</b>											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Rene Maehr</td> <td>02/25/2010</td> </tr> <tr> <td>Douglas Melton</td> <td>11/03/2009</td> </tr> <tr> <td>Stuart L. Schreiber</td> <td>06/02/2010</td> </tr> </tbody> </table>		Name	Execution Date	Rene Maehr	02/25/2010	Douglas Melton	11/03/2009	Stuart L. Schreiber	06/02/2010		
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<b>RECEIVING PARTY DATA</b>											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name:</td> <td>Howard Hughes Medical Institute</td> </tr> <tr> <td>Street Address:</td> <td>4000 Jones Bridge Road</td> </tr> <tr> <td>City:</td> <td>Chevy Chase</td> </tr> <tr> <td>State/Country:</td> <td>MARYLAND</td> </tr> <tr> <td>Postal Code:</td> <td>20815</td> </tr> </table>		Name:	Howard Hughes Medical Institute	Street Address:	4000 Jones Bridge Road	City:	Chevy Chase	State/Country:	MARYLAND	Postal Code:	20815
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<b>PROPERTY NUMBERS Total: 3</b>											
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<b>CORRESPONDENCE DATA</b>											
<p>Fax Number: (617)495-9568</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: (617) 495-3058</p> <p>Email: denlyn_atherton@harvard.edu</p> <p>Correspondent Name: Anne Craig</p> <p>Address Line 1: 1350 Massachusetts Ave</p> <p>Address Line 2: Harvard University, Office of Tech. Dev.</p> <p>Address Line 4: Cambridge, MASSACHUSETTS 02138</p>											
ATTORNEY DOCKET NUMBER:	3605 ALL HHMI PORTION										
NAME OF SUBMITTER:	Anne I. Craig										

OP \$120.00 12679406

**501193657**

**PATENT**  
**REEL: 024476 FRAME: 0981**

Total Attachments: 6

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## ASSIGNMENT

Assignment made 3 Nov, 2009, by Douglas A. Melton, 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 "Small Molecules IDE1 and IDE2 Efficiently Direct Endodermal Differentiation of Mouse and Human Embryonic Stem Cells" 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. Assignment. 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 "Compositions and Methods for Promoting the Generation of Definitive Endoderm" filed in the United States Patent and Trademark Office on February 6, 2009 with Serial Number 61/150,509), 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. Cooperation. 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.

3. Parties. 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:

Douglas A. Melton  
Douglas A. Melton, PhD

Commonwealth of Massachusetts

County of Middlesex

Then personally appeared before me the above-named Douglas A. Melton, PhD and acknowledged that he executed the foregoing instrument in his authorized capacity this 3rd day of November, 2009

Notary Public:

Carol Sutherland  
Carol Sutherland  
(print name)

My Commission Expires: 12/17/2015

(SEAL)

Harvard 3605  
HHMI 04324

## ASSIGNMENT

Assignment made June 2, 2010, by Stuart L. Schreiber, 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 "Small Molecules IDE1 and IDE2 Efficiently Direct Endodermal Differentiation of Mouse and Human Embryonic Stem Cells" 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. Assignment. 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 "Compositions and Methods for Promoting the Generation of Definitive Endoderm" filed in the United States Patent and Trademark Office on February 6, 2009 with Serial Number 61/150,509), 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. Cooperation. 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.

3. Parties. 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:

  
Stuart L. Schreiber, PhD

Commonwealth of Massachusetts

County of ESSEX

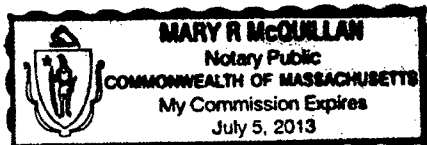
Then personally appeared before me the above-named Stuart L. Schreiber, PhD and acknowledged that he executed the foregoing instrument in his authorized capacity this 2 day of JUNE, 2010.

Notary Public:



(SEAL)

MARY R. McQUILLAN  
(print name)



My Commission Expires: 7-5-2013

Harvard 3605  
HHMI 04324

## ASSIGNMENT

Assignment made Feb 25th, 2010, by Rene Maehr, PhD ("Inventor") to the Howard Hughes Medical Institute, a Delaware corporation ("HHMI").

### Recitals

WHEREAS, Inventor was 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 "Small Molecules IDE1 and IDE2 Efficiently Direct Endodermal Differentiation of Mouse and Human Embryonic Stem Cells" 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. Assignment. 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 "Compositions and Methods for Promoting the Generation of Definitive Endoderm" filed in the United States Patent and Trademark Office on February 6, 2009 with Serial Number 61/150,509), 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. Cooperation. 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.

3. Parties. 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:

  
Rene Maehr, PhD


Commonwealth of Massachusetts

County of Middlesex

Then personally appeared before me the above-named Rene Maehr, PhD and acknowledged that he executed the foregoing instrument in his authorized capacity this 25 day of February, 2010

(SEAL)

Notary Public:

  
Celia Shneider  
(print name)

My Commission Expires: 12/17/15

Harvard 3605  
HHMI 04324