

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>William R. Jacobs</td> <td>11/19/2012</td> </tr> </tbody> </table>		Name	Execution Date	William R. Jacobs	11/19/2012						
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>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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PROPERTY NUMBERS Total: 2											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>PCT Number:</td> <td>US2012061059</td> </tr> <tr> <td>Application Number:</td> <td>61550094</td> </tr> </tbody> </table>		Property Type	Number	PCT Number:	US2012061059	Application Number:	61550094				
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CORRESPONDENCE DATA											
<p>Fax Number: 2123368001  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>          Email: ptodocket@arelaw.com          Correspondent Name: Amster Rothstein &amp; Ebenstein          Address Line 1: 90 Park Avenue          Address Line 4: New York, NEW YORK 10016</p>											
ATTORNEY DOCKET NUMBER:	96700-1899										
NAME OF SUBMITTER:	Brian J. Amos										
<p>Total Attachments: 2          source=96700_1899_Assignment_filed_12_5_12#page1.tif          source=96700_1899_Assignment_filed_12_5_12#page2.tif</p>											

CH \$80.00 US2012061059

ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt of which is hereby acknowledged,

ASSIGNORS:

- (1) Full Name of Inventor: William R. Jacobs  
Residence: 47 Iden Avenue, Pelham, NY 10803  
Citizenship: US

hereby sells, assigns, and transfers to ASSIGNEE:

Howard Hughes Medical Institute  
4000 Jones Bridge Road  
Chevy Chase, MD 20815

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries and regions, including all rights to claim priority, in and to the invention entitled:

**RECOMBINANT MYCOBACTERIOPHAGES FOR DELIVERY OF NUCLEIC ACIDS OF  
INTEREST INTO MYCOBACTERIA**

that was invented by ASSIGNOR, and which is found in U.S. Provisional Patent Application No. 61/550,094, filed on October 21, 2011, and in PCT International Patent Application No. PCT/US12/61059 filed on October 19, 2012, and any legal equivalent thereof in a foreign country or region, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, divisional, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

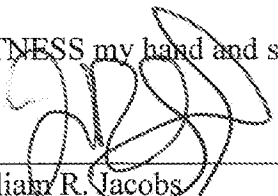
ASSIGNOR hereby covenants that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNOR authorizes ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries or regions, in ASSIGNEE's name, or in ASSIGNOR'S name, at ASSIGNEE's election.

ASSIGNOR covenants and agrees to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNOR authorizes and requests the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from the aforesaid application, to said Albert Einstein College of Medicine of Yeshiva University, as the ASSIGNEE.

WITNESS my hand and seal on:

  
\_\_\_\_\_  
William R. Jacobs

11/19/12  
\_\_\_\_\_  
Date