**PATENT ASSIGNMENT COVER SHEET**

**SUBMISSION TYPE:** NEW ASSIGNMENT  
**NATURE OF CONVEYANCE:** ASSIGNMENT

### CONVEYING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEONID BEIGELMAN</td>
<td>08/31/2012</td>
</tr>
<tr>
<td>JAMES MCSWIGGEN</td>
<td>07/28/2012</td>
</tr>
</tbody>
</table>

### RECEIVING PARTY DATA

<table>
<thead>
<tr>
<th>Name:</th>
<th>MERCK SHARP &amp; DOHME CORP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td>ONE MERCK DRIVE</td>
</tr>
<tr>
<td>Internal Address:</td>
<td>PO BOX 100</td>
</tr>
<tr>
<td>City:</td>
<td>WHITEHOUSE STATION</td>
</tr>
<tr>
<td>State/Country:</td>
<td>NEW JERSEY</td>
</tr>
<tr>
<td>Postal Code:</td>
<td>08889</td>
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### PROPERTY NUMBERS Total: 1

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<tr>
<th>Property Type</th>
<th>Number</th>
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<tbody>
<tr>
<td>Application Number</td>
<td>15483354</td>
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</table>

### CORRESPONDENCE DATA

**Fax Number:** (617)395-7070  
*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) 395-7003  
**Email:** HRKPatents@LALaw.com  
**Correspondent Name:** LANDO & ANASTASI, LLP  
**Address Line 1:** RIVERFRONT OFFICE PARK  
**Address Line 2:** ONE MAIN STREET, SUITE 1100  
**Address Line 4:** CAMBRIDGE, MASSACHUSETTS 02142

**ATTORNEY DOCKET NUMBER:** A2038-7206030FT  
**NAME OF SUBMITTER:** HANNAH R. KOYFMAN  
**SIGNATURE:** /Hannah R. Koyfman/  
**DATE SIGNED:** 06/08/2017

Total Attachments: 4  
source=Executed Assignment Inventors to Merck signed by McSwiggen as recorded#page1.tif  
source=Executed Assignment Inventors to Merck signed by McSwiggen as recorded#page2.tif  
source=Executed Assignment Inventors to Merck signed by Beigelman as recorded#page1.tif
WHEREAS, I/WE,
(1) James McSwiggen, located at Arlington, MA 02474,
(2) Leonid Beigelman, located at San Mateo, CA, 94402,
(hereinafter ASSIGNOR(S)), is/are the inventor(s) of the invention described in an application for Patents having the
Attorney Docket Number indicated above and the following Title of the Invention:

RNA INTERFERENCE MEDIATED INHIBITION OF GENE EXPRESSION USING CHEMICALLY MODIFIED SHORT
INTERFERING NUCLEIC ACID (SINA)

and/or in the following application(s):

U.S. Application No. 13/480,656 having a filing date of 05/25/2012;

WHEREAS I/WE covenant that the rights and property herein conveyed are free and clear of any encumbrance,
and that I/WE have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey,
having an office at 128 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal
representatives (hereinafter ASSIGNEE), is desirous of obtaining the entire right, title and interest in, to and under
the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I/WE, said
ASSIGNOR(S), do each hereby sell, assign and transfer or confer the grant and assignment to said ASSIGNEE my/our
entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents,
in and to the right to file patent applications in the name of ASSIGNEE, its designee, or in any or all of our names, at its
election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries
derived from the above-identified application for Patents under the International Convention for the Protection of Industrial
Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any
other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are
granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent
application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues,
renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said ASSIGNEE, to the
full extent of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have
been held and enjoyed by us if this assignment and sale had not been made.

AND I/WE HEREBY covenant and agree that we will at any time, upon the request and at the expense of
ASSIGNEE, without further compensation or charge to said ASSIGNEE, execute and deliver any and all documents that
may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and
continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of ASSIGNEE, including
the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary
or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and
declarations and do all lawful acts requisite for procuring the same or for aiding therein.

I/WE HEREBY authorize ASSIGNEE to insert in this instrument the Application Number(s) and the filing date(s) of
said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be
an original, but all such components shall together constitute but one and the same document.
Worldwide Assignment

Executed this 23 day of July, 2012.

James McSwiggen

ACKNOWLEDGEMENT

State of Massachusetts
County of Middlesex

On this 28 day of July, 2012, personally appeared before me James McSwiggen to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Notary Public

Executed this ___ day of ________________, 2012

Leonid Belgelman

ACKNOWLEDGEMENT

State of California
County of San Mateo

On this ___ day of ________________, 2012, personally appeared before me Leonid Belgelman to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Notary Public
WHEREAS, IWE,

(1) James McSwiggen, located at Arlington, MA 02474,
(2) Leonid Belelman, located at San Mateo, CA, 94402,

(hereinafter ASSIGNOR(S)), is/are the inventor(s) of the invention described in an application for Patents having the
Attorney Docket Number indicated above and the following Title of the Invention:

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INTERFERING NUCLEIC ACID (SINA)

and/or in the following application(s):

U.S. Application No. 13/480,655 having a filing date of 05/25/2012;

WHEREAS IWE covenant that the rights and property herein conveyed are free and clear of any encumbrance, and that Iwe have the full right to convey the same as herein expressed.

WHEREAS, Merck Sharp & Dohme Corp., a corporation organized under the laws of the State of New Jersey, having an office at 126 East Lincoln Avenue, Rahway, New Jersey 07065, and its successors, assigns and legal representatives (hereinafter ASSIGNEE), is desirous of obtaining the entire right, title and interest in, to and under the invention disclosed in said application or applications;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Iwe, said ASSIGNOR(S), do each hereby sell, assign and transfer or confirm the grant and assignment to said ASSIGNEE my/our entire right, title and interest in all countries of the world in and to my/our invention described in said application for Patents, in and to the right to file patent applications in the name of ASSIGNEE, its designee, or in any or all of our names, at its election, on the aforesaid invention in all countries of the world, together with all rights of priority in the aforesaid countries deriving from the above-identified application for Patents under the International Convention for the Protection of Industrial Property, under the Inter-American Convention relating to Inventions, Patents, Designs and Industrial Models and under any other international arrangement relating to patents or intellectual property, in and to any and all Letters Patent that are granted from the aforesaid application for Patents, in and to any applications claiming priority benefits to a provisional patent application or other applications filed on said invention, and in and to any continuations, divisions, reexaminations, reissues, renewals and extensions thereof of any of said Letters Patent, the same to be held and enjoyed by said ASSIGNEE, to the full ends of the terms for which all Letters Patent therefore may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND IWE HEREBY covenant and agree that we will at any time, upon the request and at the expense of ASSIGNEE, without further compensation or charge to said ASSIGNEE, execute and deliver any and all documents that may be necessary or desirable to perfect the title to the foregoing invention, patent applications, and Letters Patent and continuations, divisions, reexaminations, reissues, renewals and extensions thereof in the name of ASSIGNEE, including the execution and procurement of any and all further documents evidencing this assignment and sale as may be necessary or desirable for recording the same in the Patent Office of any country concerned, and will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or aiding therein.

IWE HEREBY authorize ASSIGNEE to insert in this instrument the Application Number(s) and the filing date(s) of said application for Patents when officially notified thereof.

This document may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such components shall together constitute but one and the same document.
Executed this ____ day of ___ , 2012

James McSwiggen

ACKNOWLEDGEMENT

State of Massachusetts

County of Middlesex

On this ____ day of _____________, 2012, personally appeared before me James McSwiggen to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Notary Public

Executed this 31 day of August , 2012

Leonid Belgelman

ACKNOWLEDGEMENT

State of California

County of San Mateo

On this 31 day of August, 2012, personally appeared before me Leonid Belgelman to me known, and known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he (she) executed the same, of his (her) own free will for the purpose set forth.

(Seal)

Notary Public

TIMOTHY PATRICK BREEN
Commission # 184986
Notary Public - California
San Francisco County
My Comm. Expires Apr 30, 2019