

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Phillip D. ZAMORE	08/24/2010
Gyorgy HUTVAGNER	08/19/2010
Dianne SCHWARZ	08/25/2010
Martin SIMARD	08/18/2010
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	University of Massachusetts
<b>Street Address:</b>	225 Franklin Street
<b>Internal Address:</b>	12th Floor
<b>City:</b>	Boston
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02110
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	12748689
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(617)742-4214
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
<b>Phone:</b>	617-573-4700
<b>Email:</b>	gayle.coy@nelsonmullins.com
<b>Correspondent Name:</b>	Debra J. Milasincic
<b>Address Line 1:</b>	Nelson Mullins Riley and Scarborough LLP
<b>Address Line 2:</b>	One Post Office Square
<b>Address Line 4:</b>	Boston, MASSACHUSETTS 02109-2127
<b>ATTORNEY DOCKET NUMBER:</b>	UMY-066CPDV2
<b>NAME OF SUBMITTER:</b>	Megan E. Williams

CH \$40.00 12748689

**Total Attachments: 24**

source=Assignment#page1.tif  
source=Assignment#page2.tif  
source=Assignment#page3.tif  
source=Assignment#page4.tif  
source=Assignment#page5.tif  
source=Assignment#page6.tif  
source=Assignment#page7.tif  
source=Assignment#page8.tif  
source=Assignment#page9.tif  
source=Assignment#page10.tif  
source=Assignment#page11.tif  
source=Assignment#page12.tif  
source=Assignment#page13.tif  
source=Assignment#page14.tif  
source=Assignment#page15.tif  
source=Assignment#page16.tif  
source=Assignment#page17.tif  
source=Assignment#page18.tif  
source=Assignment#page19.tif  
source=Assignment#page20.tif  
source=Assignment#page21.tif  
source=Assignment#page22.tif  
source=Assignment#page23.tif  
source=Assignment#page24.tif

## ASSIGNMENT BY INVENTORS

WE, Phillip D. ZAMORE; Gyorgy HUTVAGNER; Dianne SCHWARZ; and Martin SIMARD, of Northboro, Massachusetts; Worcester, Massachusetts; Westborough, Massachusetts; and Deschambault, Canada, respectively, in consideration of One Dollar and other valuable consideration paid to us by

UNIVERSITY OF MASSACHUSETTS

a University of Massachusetts, having its principal place of business at 225 Franklin Street, 12th Floor, Boston, Massachusetts 02110, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

UNIVERSITY OF MASSACHUSETTS

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

METHODS AND COMPOSITIONS FOR ENHANCING THE EFFICACY AND SPECIFICITY OF RNA SILENCING

described in an application

Executed by us of even date herewith and about to be filed

or

Application No. 12/748,689, filed on March 29, 2010

This application claims the benefit of the following provisional application(s):

Provisional Application No. 60/475331, filed on June 2, 2003  
Provisional Application No. 60/507928, filed on September 30, 2003  
Provisional Application No. 60/575268, filed on May 28, 2004

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said University and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said University, with specifications and claims in such form as shall be approved by the counsel of said University and to vest and confirm in said University, its successors and assigns, the legal title to all such patents.

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said University, its successors and assigns.

And we do further hereby grant the attorneys/agents of Lahive & Cockfield, LLP, the power to insert on this Assignment the filing date and/or application number of said application.

Phillip D. Zamore  
Phillip D. Zamore

Date: Aug. 24, 2010

United States of America )  
State of Massachusetts ss.:  
County of Worcester )

On this 24<sup>th</sup> day of August, 2010 before me, the  
the undersigned notary public, personally appeared Phillip D. Zamore  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was driver's license, to be the person whose name  
is signed on the preceding or attached document in my presence.

Karen P. Welch (official signature and seal of notary)

My commission expires May 5, 2011

\_\_\_\_\_  
Gyorgy Hutvagner

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Dianne Schwarz

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Martin Simard

Date: \_\_\_\_\_

Canada )  
Province of \_\_\_\_\_ ) ss.:  
City of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_



## ASSIGNMENT BY INVENTORS

WE, Phillip D. ZAMORE; Gyorgy HUTVAGNER; Dianne SCHWARZ; and Martin SIMARD, of Northboro, Massachusetts; Worcester, Massachusetts; Westborough, Massachusetts; and Deschambault, Canada, respectively, in consideration of One Dollar and other valuable consideration paid to us by

UNIVERSITY OF MASSACHUSETTS

a University of Massachusetts, having its principal place of business at 225 Franklin Street, 12th Floor, Boston, Massachusetts 02110, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

UNIVERSITY OF MASSACHUSETTS

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

METHODS AND COMPOSITIONS FOR ENHANCING THE EFFICACY AND SPECIFICITY OF RNA SILENCING

described in an application

Executed by us of even date herewith and about to be filed

or

Application No. 12/748,689, filed on March 29, 2010

This application claims the benefit of the following provisional application(s):

Provisional Application No. 60/475331, filed on June 2, 2003  
Provisional Application No. 60/507928, filed on September 30, 2003  
Provisional Application No. 60/575268, filed on May 28, 2004

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said University and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said University, with specifications and claims in such form as shall be approved by the counsel of said University and to vest and confirm in said University, its successors and assigns, the legal title to all such patents.

**PATENT**

**REEL: 026633 FRAME: 0364**

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said University, its successors and assigns.

And we do further hereby grant the attorneys/agents of Lahive & Cockfield, LLP, the power to insert on this Assignment the filing date and/or application number of said application.

\_\_\_\_\_  
Phillip D. Zamore

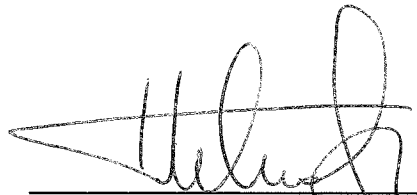
Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

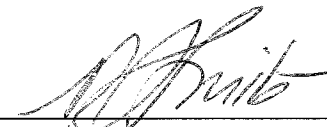
  
\_\_\_\_\_  
Gyorgy Hutvagner

Date: 19<sup>th</sup> AUGUST 2010

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

UNITED KINGDOM  
TAYSIDE REGION  
CITY OF DUNDEE

On this 19<sup>th</sup> day of AUGUST, 2010 before me, the  
the undersigned notary public, personally appeared GYORGY HUTVAGNER  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was A FULL PASSPORT, to be the person whose name  
is signed on the preceding or attached document in my presence.

  
\_\_\_\_\_  
(official signature and seal of notary)

My commission expires COMMISSION DOES NOT EXPIRE

\_\_\_\_\_  
Dianne Schwarz

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Martin Simard

Date: \_\_\_\_\_

Canada \_\_\_\_\_ )  
Province of \_\_\_\_\_ ) ss.:  
City of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

## ASSIGNMENT BY INVENTORS

WE, Phillip D. ZAMORE; Gyorgy HUTVAGNER; Dianne SCHWARZ; and Martin SIMARD, of Northboro, Massachusetts; Worcester, Massachusetts; Westborough, Massachusetts; and Deschambault, Canada, respectively, in consideration of One Dollar and other valuable consideration paid to us by

UNIVERSITY OF MASSACHUSETTS

a University of Massachusetts, having its principal place of business at 225 Franklin Street, 12th Floor, Boston, Massachusetts 02110, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

UNIVERSITY OF MASSACHUSETTS

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

### METHODS AND COMPOSITIONS FOR ENHANCING THE EFFICACY AND SPECIFICITY OF RNA SILENCING

described in an application

Executed by us of even date herewith and about to be filed

or

Application No. 12/748,689, filed on March 29, 2010

This application claims the benefit of the following provisional application(s):

Provisional Application No. 60/475331, filed on June 2, 2003  
Provisional Application No. 60/507928, filed on September 30, 2003  
Provisional Application No. 60/575268, filed on May 28, 2004

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said University and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said University, with specifications and claims in such form as shall be approved by the counsel of said University and to vest and confirm in said University, its successors and assigns, the legal title to all such patents.

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said University, its successors and assigns.

And we do further hereby grant the attorneys/agents of Lahive & Cockfield, LLP, the power to insert on this Assignment the filing date and/or application number of said application.



\_\_\_\_\_  
Phillip D. Zamore

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Gyorgy Hutvagner

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

Dianne Schwarz  
Dianne Schwarz

Date: August 25, 2010

United States of America )  
State of Massachusetts ) ss.:  
County of Suffolk )

On this 25<sup>th</sup> day of August, 2010 before me, the  
the undersigned notary public, personally appeared Dianne Schwarz  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was Massachusetts Drivers License, to be the person whose name  
is signed on the preceding or attached document in my presence.

[Signature] (official signature and seal of notary)

My commission expires 12/23/2016



\_\_\_\_\_  
Martin Simard

Date: \_\_\_\_\_

Canada )  
Province of \_\_\_\_\_ ) ss.:  
City of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

**ASSIGNMENT BY INVENTORS**

WE, Phillip D. ZAMORE; Gyorgy HUTVAGNER; Dianne SCHWARZ; and Martin SIMARD, of Northboro, Massachusetts; Worcester, Massachusetts; Westborough, Massachusetts; and Deschambault, Canada, respectively, in consideration of One Dollar and other valuable consideration paid to us by

UNIVERSITY OF MASSACHUSETTS

a University of Massachusetts, having its principal place of business at 225 Franklin Street, 12th Floor, Boston, Massachusetts 02110, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

UNIVERSITY OF MASSACHUSETTS

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

METHODS AND COMPOSITIONS FOR ENHANCING THE EFFICACY AND SPECIFICITY OF RNA SILENCING

described in an application

Executed by us of even date herewith and about to be filed

or

Application No. 12/748,689, filed on March 29, 2010

This application claims the benefit of the following provisional application(s):

Provisional Application No. 60/475331, filed on June 2, 2003  
Provisional Application No. 60/507928, filed on September 30, 2003  
Provisional Application No. 60/575268, filed on May 28, 2004

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said University and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said University, with specifications and claims in such form as shall be approved by the counsel of said University and to vest and confirm in said University, its successors and assigns, the legal title to all such patents.

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said University, its successors and assigns.

And we do further hereby grant the attorneys/agents of Lahive & Cockfield, LLP, the power to insert on this Assignment the filing date and/or application number of said application.

\_\_\_\_\_  
Phillip D. Zamore

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Gyorgy Hutvagner

Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_



\_\_\_\_\_  
Dianne Schwarz

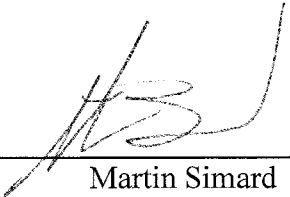
Date: \_\_\_\_\_

United States of America )  
State of \_\_\_\_\_ ) ss.:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me, the  
the undersigned notary public, personally appeared \_\_\_\_\_  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was \_\_\_\_\_, to be the person whose name  
is signed on the preceding or attached document in my presence.

\_\_\_\_\_  
(official signature and seal of notary)

My commission expires \_\_\_\_\_



Martin Simard

Date: August 18, 2010

Canada )  
Province of Quebec ) ss.:  
City of Quebec )

On this 18th day of August, 2010 before me, the  
the undersigned notary public, personally appeared Martin Simard  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was his license driver, to be the person whose name  
is signed on the preceding or attached document in my presence.

Sylvie Drouin, notary (official signature and seal of notary)  
01151 Sylvie Drouin, notary  
My commission expires Ø