

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4519130

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHAD A. MIRKIN	01/23/2015
LIANGLIANG HAO	01/23/2015
EVELYN AUYEUNG	02/03/2015
CHUNG HANG J. CHOI	01/23/2015
SUGUNA P. NARAYAN	01/23/2015
<b>RECEIVING PARTY DATA</b>	
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<b>Street Address:</b>	633 CLARK STREET
<b>City:</b>	EVANSTON
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60208
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15527840
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)474-0448
<i>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.</i>	
<b>Phone:</b>	3124746300
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<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60606
<b>ATTORNEY DOCKET NUMBER:</b>	30938/2014-183 US
<b>NAME OF SUBMITTER:</b>	MICHAEL J. ALLIKIAN
<b>SIGNATURE:</b>	/Michael J. Allikian/
<b>DATE SIGNED:</b>	07/25/2017
<b>Total Attachments: 6</b>	

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**ASSIGNMENT**

Serial No: 62/083,092  
Filing Date: November 21, 2014  
Title of U.S. Patent Application: **The Sequence-Specific Cellular Uptake of Spherical Nucleic Acid Nanoparticles Conjugates**

For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned hereby assigns to Northwestern University, an Illinois not-for-profit corporation, having a place of business at 633 Clark Street, Evanston, Illinois 60208 and its successors and assigns ("Assignee") the entire right, title and interest in and to the inventions of such undersigned disclosed in the application listed above, and in any and all other applications anywhere in the world which the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, in any and all patents which may be obtained on any of said applications and in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates and/or extensions thereof, including without limitation, the right to bring suit and to claim and retain all damages and/or seek other remedies for the past, present and future infringement of any of the foregoing, the right of priority, including without limitation to claim priority benefit of or to said patent applications, and request the Commissioner for Patents in the United States and similar authorities outside the United States to issue said patents to and in the name of the Assignee.

Each of the undersigned states that the application listed above is or was made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original inventor or a joint inventor with another undersigned of a claimed invention in the application listed above. Each of the undersigned acknowledges that any willful false statement made by him or her in this paragraph is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all its rights, titles and interests herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the rights, titles and interests herein assigned.

Upon the request of Assignee and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions, including without limitation for the reissue, reexamination, supplementary protection certificate or extension thereof and any oath, declaration or affidavit relating thereto that said Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce and vest in Assignee the rights, titles and interests assigned herein, including without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said rights, titles and interests will be held and enjoyed by said Assignee to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

ASSIGNEE: Northwestern University:

On behalf of Northwestern University, Assignee, the authorized signatory below, hereby confirms Assignee's acceptance of all rights, privileges, titles and interests conveyed by this Assignment.

Signature: Beverly R. Milligan Date: 2/3/2015  
Name: Beverly R. Milligan  
Title: Invention Specialist, Innovation and New Ventures Office (INVO)

Undersigned (ASSIGNORS):

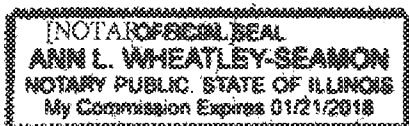
Chad A. Mirkin 1/23/15  
Inventor Name: Chad A. Mirkin DATE

State of ILLINOIS ss.  
County of COOK

On this 23RD day of JANUARY, 2015, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

Ann L. Wheatley-Seamon  
NOTARY PUBLIC

My Commission Expires: 1-21-2018



Serial No: 62/083,092

Filing Date: November 21, 2014

Title of U.S. Patent Application: The Sequence-Specific Cellular Uptake of Spherical Nucleic Acid Nanoparticles Conjugates

Undersigned (ASSIGNORS) continued:

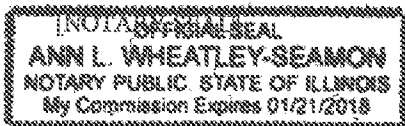
Liangliang Hao 01/23/2015  
Inventor Name: Liangliang Hao DATE

State of ILLINOIS ss.  
County of COOK

On this 23rd day of JANUARY, 2015, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

Ann L. Wheatley-Seamon  
NOTARY PUBLIC

My Commission Expires: 1-21-2018



Attorney Docket No. 30938/2014-183P  
NU Reference No. 2014-183-01

Serial No: 62/083,092

Filing Date: November 21, 2014

Title of U.S. Patent Application: The Sequence-Specific Cellular Uptake of Spherical Nucleic Acid Nanoparticles Conjugates

Undersigned (ASSIGNORS) continued:

Evelyn Auyeung 02/03/2015  
Inventor Name: Evelyn Auyeung DATE

State of New York  
County of New York ss.

On this 3rd day of February, 2015, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

TUNG H. CHEN  
Notary Public in and for the State of New York  
Commission Expires Sept. 12, 2017  
[NOTARY SEAL]

[Signature]  
NOTARY PUBLIC

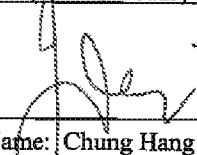
My Commission Expires: \_\_\_\_\_

Serial No: 62/083,092

Filing Date: November 21, 2014

Title of U.S. Patent Application: The Sequence-Specific Cellular Uptake of Spherical Nucleic Acid Nanoparticles Conjugates

Undersigned (ASSIGNORS) continued:

  
Inventor Name: Chung Hang J. Choi DATE 23/1/2015

State of \_\_\_\_\_  
County of HONG KONG <sup>SS.</sup> CHINA

On this 23<sup>rd</sup> day of January, 2015, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

\_\_\_\_\_  
NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: \_\_\_\_\_

MEI YI WONG



RM 1314, KAL SHUN HOUSE  
KAL TIN ESTATE, LAM TIN, KLN,  
HONG KONG

23 / JAN / 2015

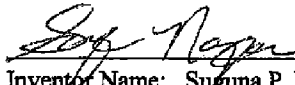
Attorney Docket No. 30938/2014-183P  
NU Reference No. 2014-183-01

Serial No: 62/083,092

Filing Date: November 21, 2014

Title of U.S. Patent Application: The Sequence-Specific Cellular Uptake of Spherical Nucleic Acid Nanoparticles Conjugates

Undersigned (ASSIGNORS) continued:

  
Inventor Name: Suguna P. Narayan      1/23/15  
DATE

State of ILLINOIS ss.  
County of COOK

On this 23RD day of JANUARY, 2015, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

  
NOTARY PUBLIC

My Commission Expires: 1-21-2018

