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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2886029

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                                 |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                                     |
| <b>CONVEYING PARTY DATA</b>   |  |
| <b>Name</b>   | <b>Execution Date</b>                          |
| WILLIAM F. DEGRADO  | 11/14/2012                                     |
| JIZHOU WANG   | 11/19/2012                                     |
| JUN WANG  | 09/27/2012                                     |
| HYUNIL JO   | 09/17/2012                                     |
| BELGIN CANTURK  | 09/19/2012                                     |
| <b>RECEIVING PARTY DATA</b>   |  |
| <b>Name:</b>  | THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA |
| <b>Street Address:</b>  | 3160 CHESTNUT STREET                           |
| <b>Internal Address:</b>  | SUITE 200                                      |
| <b>City:</b>  | PHILADELPHIA                                   |
| <b>State/Country:</b>   | PENNSYLVANIA                                   |
| <b>Postal Code:</b>   | 19104  |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |
| <b>Property Type</b>  | <b>Number</b>                                  |
| <b>Application Number:</b>  | 14363116                                       |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  | (215)568-3439                                  |
| <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>   | 215-568-3100                                   |
| <b>Email:</b>   | assignments@woodcock.com                       |
| <b>Correspondent Name:</b>  | BAKER & HOSTETLER LLP                          |
| <b>Address Line 1:</b>  | CIRA CENTRE 12TH FLOOR                         |
| <b>Address Line 2:</b>  | 2929 ARCH STREET                               |
| <b>Address Line 4:</b>  | PHILADELPHIA, PENNSYLVANIA 19104-2891          |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 103241.005943 / Y6046                          |
| <b>NAME OF SUBMITTER:</b>   | VALERIE CHICCHI                                |
| <b>SIGNATURE:</b>   | /Valerie Chicchi/                              |
| <b>DATE SIGNED:</b>   | 06/05/2014                                     |
| <b>Total Attachments: 12</b>  |  |

PATENT

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source=EXECUTED\_ASSIGNMENTS#page12.tif

DOCKET NO.: UPN-5593 / Y6046

**ASSIGNMENT**

WHEREAS, I, **William F. Degrado**, a citizen of **United States**, residing at **934 Carolina Street, #1, San Francisco, California 94107**, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number **UPN-5593 / Y6046** ("the invention"), assigned application number **61/567,328** filed **December 6, 2011**, which is entitled **INHIBITORS TARGETING DRUG-RESISTANT INFLUENZA A** ("the subject application").

AND WHEREAS, **The Trustees Of The University of Pennsylvania**, ASSIGNEE, having a place of business at **3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104**, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

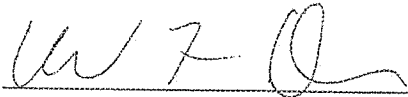
AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

DOCKET NO.: UPN-5593 / Y6046

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 14<sup>th</sup> day of Nov., year of 2012.



Signature – William F. DeGrado

\*\*\*\*\*

STATEMENT OF NOTARY PUBLIC

STATE OF \_\_\_\_\_:

: SS

COUNTY OF \_\_\_\_\_:

On this \_\_\_\_\_ day of \_\_\_\_\_, year of 2012, before me personally came the above named **William F. DeGrado** to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

\_\_\_\_\_  
Notary Public

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1129

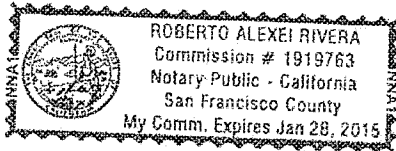
State of California

County of SAN FRANCISCO

On 11/14/2012 before me, ROBERTO ALEXEI RIVERA NOTARY PUBLIC

personally appeared WILLIAM F DEGRADO

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Roberto Alexei Rivera

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: ASSIGNMENT

Document Date: 11/14/2012 Number of Pages: 2

Signer(s) Other Than Named Above: \_\_\_\_\_

Capacity(ies) Claimed by Signer(s)

Signer's Name: WILLIAM F. DEGRADO Signer's Name: N/A

Corporate Officer -- Title(s): \_\_\_\_\_

Individual  
 Partner --  Limited  General

Attorney in Fact

Trustee

Guardian or Conservator

Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



Corporate Officer -- Title(s): \_\_\_\_\_

Individual

Partner --  Limited  General

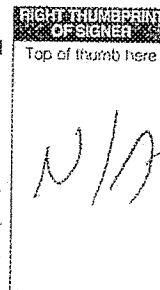
Attorney in Fact

Trustee

Guardian or Conservator

Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



DOCKET NO.: UPN-5593 / Y6046

ASSIGNMENT

WHEREAS, I, Jizhou Wang, a citizen of China, residing at 1716 Osprey Drive, Eagleville, Pennsylvania 19403, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number UPN-5593 / Y6046 ("the invention"), assigned application number 61/567,328 filed December 6, 2011, which is entitled INHIBITORS TARGETING DRUG-RESISTANT INFLUENZA A ("the subject application").

AND WHEREAS, The Trustees Of The University of Pennsylvania, ASSIGNEE, having a place of business at 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal

DOCKET NO.: UPN-5593 / Y6046

representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 19 day of November, year of 2012.

  
Signature - Jizhou Wang

\*\*\*\*\*

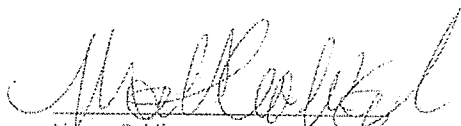
STATEMENT OF NOTARY PUBLIC

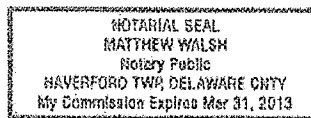
STATE OF Delaware:

: SS Delaware

COUNTY OF Delaware:

On this 19 day of November, year of 2012, before me personally came the above named Jizhou Wang to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

  
Notary Public



DOCKET NO.: UPN-5593 / Y6046

ASSIGNMENT

WHERLAS, I. Jan Wang, a citizen of P.R. China, residing at 3925 Pine Street, #312, Philadelphia, Pennsylvania 19104, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number UPN-5593 / Y6046 ("the invention"), assigned application number 61/567,328 filed December 6, 2011, which is entitled INHIBITORS TARGETING DRUG-RESISTANT INFLUENZA A ("the subject application").

AND WHEREAS, The Trustees Of The University of Pennsylvania, ASSIGNEE, having a place of business at 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

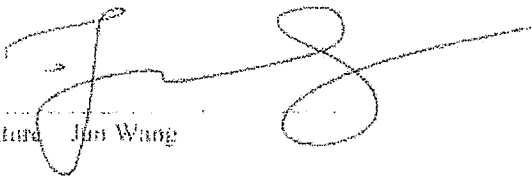
AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.



DOCKET NO.: UPN-5593 / Y6046

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 27 day of Sep year of 2012.

Signature:  Jun Wang

\*\*\*\*\*

STATEMENT OF NOTARY PUBLIC

STATE OF \_\_\_\_\_

: SS

COUNTY OF \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, year of 2012, before me personally came the above named Jun Wang to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

\_\_\_\_\_  
Notary Public

See Attached California  
All-Purpose  
Acknowledgment

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1139

State of California

County of SAN FRANCISCO

On Sept 27, 2012 before me,

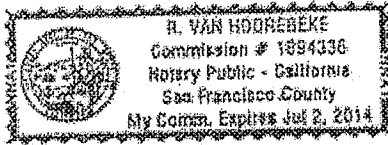
R. Van Hoorebake Notary Public

personally appeared Jun Wang

Non-Invent Name and Title of the Office

Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: [Handwritten Signature]  
Signature of Notary Public

Place Heavy Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document

Description of Attached Document

Title or Type of Document: ASSIGNMENT

Document Date: 9/27/12

Number of Pages: 2

Signer(s) Other Than Named Above:

Capacity(ies) Claimed by Signer(s)

Signer's Name:

Signer's Name:

Corporate Officer -- Title(s):

Corporate Officer -- Title(s):

Individual

Individual

Partner --  Limited  General

Partner --  Limited  General

Attorney in Fact

Attorney in Fact

Trustee

Trustee

Guardian or Conservator

Guardian or Conservator

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

DOCKET NO.: UPN-5593 / Y6046

ASSIGNMENT

WHEREAS, I, Hyunil Jo, a citizen of South Korea, residing at 1000 Conestoga Road, C-151, Bryn Mawr, Pennsylvania 19010, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number UPN-5593 / Y6046 ("the invention"), assigned application number 61/567,328 filed December 6, 2011, which is entitled INHIBITORS TARGETING DRUG-RESISTANT INFLUENZA A ("the subject application").

AND WHEREAS, The Trustees Of The University of Pennsylvania, ASSIGNEE, having a place of business at 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

DOCKET NO.: UPN-5593 / Y6046

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 17 day of September, year of 2012.

*Hyunil Jo*  
Signature -- Hyunil Jo

\*\*\*\*\*

STATEMENT OF NOTARY PUBLIC

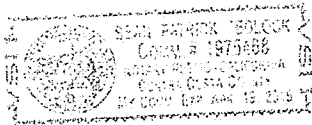
STATE OF California :

: SS

COUNTY OF Costa Costa :

On this 17 day of September, year of 2012, before me personally came the above named Hyunil Jo to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

*Sean Patrick Pedlock*  
Notary Public



DOCKET NO.: UPN-5593 / Y6046

ASSIGNMENT

WHEREAS, I, Belgin Canturk, a dual citizen of United States and Turkey, residing at 12 Fawn Hollow Road, Burlington, New Jersey 08016, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number UPN-5593 / Y6046 ("the invention"), assigned application number 61/567,328 filed December 6, 2011, which is entitled INHIBITORS TARGETING DRUG-RESISTANT INFLUENZA A ("the subject application").

AND WHEREAS, The Trustees Of The University of Pennsylvania, ASSIGNEE, having a place of business at 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuations in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

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Page 1 of 2

DOCKET NO.: UPN-5593 / Y6046

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 19 day of September, year of 2012.

Belgin Canturk  
Signature - Belgin Canturk

\*\*\*\*\*

STATEMENT OF NOTARY PUBLIC

STATE OF Pennsylvania:

: SS

COUNTY OF Philadelphia:

On this 19 day of September, year of 2012, before me personally came the above named Belgin Canturk to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Candice Adams  
Notary Public

