PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---|----------------|
| CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH | 11/09/2015 |

RECEIVING PARTY DATA

| Name: | NOVARTIS AG |
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| City: | BASEL |
| State/Country: | SWITZERLAND |
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PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15258925 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | PAT057053-US-NP |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | LISA NASH |
| SIGNATURE: | /lisa nash/ |
| DATE SIGNED: | 12/22/2016 |

Total Attachments: 4

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> PATENT REEL: 040752 FRAME: 0921

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ASSIGNMENT

This Assignment Agreement is entered into by and between **CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH**, No. 8 Building, Lane 898 Halei Road, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 201203, CHINA, a company organized under the laws of China, and **NOVARTIS AG**, a company incorporated in Switzerland whose address is Lichtstrasse 35, 4056 Basel, Switzerland.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH does hereby sell, assign and transfer to NOVARTIS AG and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of its right, title and interest for all countries of the world in and to

(1) all inventions and discoveries described in the provisional or non-provisional patent application(s) entitled

POLYOMAVIRUS NEUTRALIZING ANTIBODIES [Patent Application Reference No. PAT057053-WO-PCT]

| • | and filed in the | | | | |
|---------|---|---|---|---|--|
| E Jent. | Number | and/or filed as | a #PCT Inter | rnational Appli | cation on |
| onai | September 16, 2015 and | accorded Intern | ational Patent | : Application | Number |
| | PCT/CN2015/089764; and/o | or filed in the Unite | d States Patent | and Trademark | Office on |
| | , 20 | and accorded Applic | ation Number | | ; |
| | (2) the application(s) from such application(s), dir patent application(s); | identified in paragragectly or indirectly, inc | | | |
| | (3) the right to file discovery disclosed in any oright to file such application their designees, or on behadiscoveries, at ASSIGNEE's regions; and the right to file regions claiming the priority in paragraphs (1) or (2); | f the applications iden s on said inventions ar alf or in the name(s) election and in accord all patent, utility mo | tified in paragrap nd discoveries in of the inventor dance with applic del, or other appl | ths (1) and (2), in the names of AS r(s) of said inve- able law in all co- lications in all co- | scluding the SIGNEE or entions and puntries and puntries and |

(4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);

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- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals;
- (6) all patents, utility models, or other grants that issue from any of the applications referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH if this sale, assignment and transfer had not been made.

CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH hereby authorizes ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH hereby covenants and agrees that it will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment shall be governed by the laws of Switzerland.

This Assignment is effective as from the earliest priority date as stated above.

CHINA NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH

| Exec | uted this <u>9</u> day of _ | November, 2015 |
|------|-----------------------------|--|
| BY | Qui last | |
| | Jing (Grace) Sun | A STATE OF THE STA |
| | Authorized Signatory | . restero de 1800 miliones. |

Witnessed by:

Name: Mingram Grus Name: Rachel 2HV
Address: 6th, No.2, Boyum Road Address: 6th, No.2. Boyum Road.
Shoughan. driver. Shang hai, China

. miliebrut Aut.

Patent Family Number PAT057053

NOVARTIS AG

Executed this Hold day of December 2015

BY//// Michael G. Smith and David Carpenter

Title: Authorized Signatories

Witnessed by:

Name: Helio Serpa

5300 Chrion Way Emeryville, CA 94608 Name: Lisa Nash 5300 Chiron Way

5300 Chiron Way Emeryville, CA 94608

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