505761855 11/07/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

tylesheet Version v1.2

EPAS ID: PAT5808671

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---|----------------|
| NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC. | 02/08/2018 |

RECEIVING PARTY DATA

| Name: | NOVARTIS AG | |
|-----------------|------------------|--|
| Street Address: | LICHTSTRASSE 35 | |
| City: | BASEL | |
| State/Country: | SWITZERLAND | |
| Postal Code: | ostal Code: 4056 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 16592293 | |

CORRESPONDENCE DATA

Fax Number: (617)426-6567

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: 617-728-7100`

Email: BOSPatents@dechert.com

Correspondent Name: DECHERT LLP

Address Line 1: ONE INTERNATIONAL PLACE, 40TH FLOOR

Address Line 2: 100 OLIVER STREET

Address Line 4: BOSTON, MASSACHUSETTS 02110-2605

| ATTORNEY DOCKET NUMBER: | Y DOCKET NUMBER: 397001-001USD1 (169656) | |
|-------------------------------------|--|--|
| NAME OF SUBMITTER: ANDREA L.C. REID | | |
| SIGNATURE: | /Andrea L.C. Reid/ | |
| DATE SIGNED: | 11/07/2019 | |

Total Attachments: 3

source=resTORbio_169656_Assignment_NIBR#page1.tif source=resTORbio_169656_Assignment_NIBR#page2.tif source=resTORbio_169656_Assignment_NIBR#page3.tif

PATENT 505761855 REEL: 050944 FRAME: 0597

Docket No.: 397001-001US (157789)

ASSIGNMENT

WHEREAS, we, the undersigned, NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC., having a place of business at 250 Massachusetts Avenue, Cambridge, Massachusetts 02139, USA (hereinafter termed "Assignor"), owner of an interest in the right, title and interest in and to certain new and useful improvements disclosed in "METHODS OF ENHANCING IMMUNE RESPONSE", for which a United States Patent Application having Application No. 15/821,229 was filed November 22, 2017, a provisional U.S. patent application having Application No. 62/476,160 was filed November 23, 2016, a provisional U.S. patent application having Application No. 62/476,160 was filed March 24, 2017, and for which a provisional U.S. patent application having Application No. 62/576,511 was filed October 24, 2017 by virtue of a prior assignment from inventors Joan MANNICK and Melody MORRIS (hereinafter termed "Inventors"), and in and to all embodiments of the invention, heretofore conceived, made or discovered by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries;

WHEREAS, NOVARTIS AG, having a place of business at Lichtstrasse 35, 4056 Basel, Switzerland (hereinafter termed "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration, acknowledged by said Assignor to have been received in full from said Assignee:

- 1. Said Assignor does hereby sell, assign, transfer and convey, and/or confirm prior sale, assignments, transfer, and conveyance, unto said Assignee. Assignor's entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.
- 2. Said Assignor hereby covenants and agrees to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Assignor shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefore and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignor in providing such cooperation shall be paid for by said Assignee.
- The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns
 and other legal representatives, and shall be binding upon said Assignor, their respective heirs, legal representatives and
 assigns.
- 4. Said Assignor hereby warrants and represents that he has not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

REEL: 050944 FRAME: 0598

Docket No.: 397001-001US (157789)

The undersigned, whose title is supplied below, is authorized to act on behalf of the assignor.

Assignor:

NOVARTIS INSTITUTES FOR

r.

BIOMEDICAL RESEARCH, INC.

Date: 8 February 2018

Signed:

Karless M. Druby

Print Name:

KATHLEEN M. DRURY

Print Title:

Address:

AUTHORIZED SIGNATO

250 Massachusetts Avenue, Cambridge,

Massachusetts 02139, USA

Witness:

_Safiya Watson 700 Main Street

Cambridge, NA 02130

Witness:

Tara M. Melanson 700 Main Street Cambridge, MA 02139

REEL: 050944 FRAME: 0599

Docket No.: 397001-001US (157789)

| | | Assignee: | NOVARTIS AG |
|-------|--|--------------|--|
| Date: | February 8,208 | Signed: | Jugaren Oller |
| | ************************************** | Print Name: | <u>Susan M. Dillon</u> |
| | | Print Title: | <u>awthorized Signatory</u> |
| | | Address: | Lichtstrasse 35, 4056 Basel, SWITZERLAND |
| | | Witness: | Safiya Watson 700 Main Street Cambridge, MA 02138 |
| | | Witness: | - Vala M. Nelanon |
| | | | Tara M. Melanson 700 Main Street Cambridge, MA 02139 |
| | | Assignee: | NOVARTIS AG |
| Date: | 2 8 18 | Signed: | Louis helpe 12 |
| | | Print Name: | SOT W. WHUS-RED |
| | | Print Title: | AUTHORIZED SHARADEL: |
| | | Address: | Lichtstrasse 35, 4056 Basel, SWITZERLAND |
| | | Witness: | Saliya Watson 700 Main Street Cambridge, MA 02139 |
| | | Witness: | How M. Welson |
| | | | Tara M. Me lanson 700 Main S pect Cambridge, MA 02139 |

Page 3 of 3

RECORDED: 11/07/2019

PATENT 394 L BUSINESS

REEL: 050944 FRAME: 0600