PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3959452

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NOVARTIS INTERNATIONAL PHARMACEUTICAL LTD.	03/30/2015

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 5

Property Type	Number
Application Number:	14994710
Application Number:	14994827
Application Number:	15070905
Application Number:	15179385
Application Number:	15179644

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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) 542-5070

 Email:
 apsi@fr.com

Correspondent Name: JOHN T. KENDALL

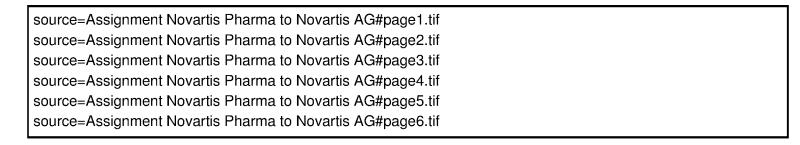
Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER:	41357-0007007
NAME OF SUBMITTER:	JILL A. WRIGHT
SIGNATURE:	/Jill A. Wright/
DATE SIGNED:	07/13/2016

Total Attachments: 6



CONFIRMATORY PATENT ASSIGNMENT

This confirmatory PATENT ASSIGNMENT ("Confirmatory Assignment") is dated March 30, 2015, and entered into by and between Novartis International Pharmaceutical Ltd., a company organized under the laws of Bermuda having a place of business at 131 Front Street, Hamilton, HM 12, Bermuda ("Assignor") and Novartis AG, a corporation organized under the laws of Switzerland having a place of business at Lichtstrasse 35, 4056 Basel, Switzerland ("Assignee"). Assignor and Assignee are collectively referred to herein as the "Parties."

WHEREAS, as of January 5, 2015, Assignor merged with IRM LLC, a limited liability company incorporated in the State of Delaware, whose address is 131 Front Street, Hamilton, HM 12, Bermuda, as evidenced by a copy of the relevant certificate of merger attached as **Schedule A** hereto; thereby becoming owner and successor-in-interest by merger to the patent rights of patent applications in the name of IRM LLC listed in **Schedule B** attached hereto, and associated rights.

WHEREAS, pursuant to the Patent Assignment between Assignor and Assignee dated February 19, 2015 (the "Assignment") but deemed to have an effect on January 5, 2015 (the "Effective Date"), the Assignor assigned to Assignee, and Assignee acquired from Assignor, the Assignor's title in and to the patent rights listed in **Schedule B** attached hereto.

NOW, THEREFORE, the Parties agree as follows:

- 1. Assignor hereby confirms having sold, transferred, conveyed, assigned, and delivered to Assignee, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the title Assignor held, or may come to hold, in any jurisdiction worldwide, in and to (i) the patent rights listed in **Schedule B** hereto, (ii) all reissues, divisions, continuations, continuations-in-part, extensions, renewals, reexaminations, national registrations and foreign counterparts of the foregoing, and (iii) all supplemental protection certificates and patent term extensions relying on or connected to any of the foregoing, (the foregoing (i), (ii) and (iii) comprising the "Assigned Patents") and (iv) all right as title holder to claim priority from any of the Assigned Patents and (v) all right as title holder to sue at law or in equity for any past, present, and future infringement, abuse, misappropriation, violation, or other impairment thereof of the Assigned Patents.
 - 2. Assignee hereby confirms having accepted such title.
- 3. The Parties hereby request and authorize the authority at the relevant national patent office to record Assignee as the recorded holder of title, legal owner, registered owner, assignee, and/or applicant, as the case may be, of the Assigned Patents.

IN WITNESS WHEREOF, the Parties hereto have caused this Confirmatory Assignment to be executed on this 30 day of March, 2015.

Agreed and accepted by:

NOVARTIS INTERNATIONAL PHARMACEUTICAL LTD.

NOVARTIS AG

Namel Title:

Kelly Stritenberger, authorized signatory

Namé:

Title:

Denise Cooper, Authorized Signatory

WITNESS to NOVARTIS INTERNATIONAL PHARMACEUTICAL LTD.

WITNESS to NOVARTIS AG

Schedule A

(Copy of Certificate of Merger on following page)

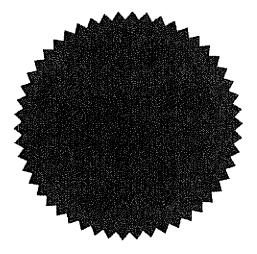


BERMUDA CERTIFICATE OF MERGER

In accordance with the provisions of Section 108 of the Companies Act, 1981 ("Act"), I **HEREBY** issue this Certificate of Merger to the surviving company bearing the name

Novartis International Pharmaceutical Ltd.

consequent upon the merger of IRM, LLC (a Delaware Limited Liability Company) and Novartis International Pharmaceutical Ltd. effective the 5th day of January 2015.



Given under my hand and the Seal of the REGISTRAR OF COMPANIES this 5th day of January 2015

9/1

for Registrar of Companies

Schedule B

Case reference	Filing Date	Filing Number	Grant Date	Grant Number
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Case reference	Filing Date	Filing Number	Grant Date	Grant Number

PATENT REEL: 039145 FRAME: 0417

RECORDED: 07/13/2016