

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3923432

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
NOVARTIS INTERNATIONAL PHARMACEUTICAL LTD		02/19/2015
RECEIVING PARTY DATA		
Name:	NOVARTIS AG	
Street Address:	LICHTSTRASSE 35	
City:	BASEL	
State/Country:	SWITZERLAND	
Postal Code:	4056	
PROPERTY NUMBERS Total: 3		
Property Type	Number	
Application Number:	13223793	
Application Number:	13640832	
Patent Number:	9315530	
CORRESPONDENCE DATA		
Fax Number:	(610)270-5090	
<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>		
Phone:	6102706812	
Email:	us_cipkop@gsk.com	
Correspondent Name:	GLAXOSMITHKLINE	
Address Line 1:	709 SWEDELAND ROAD	
Address Line 2:	UW2220	
Address Line 4:	KING OF PRUSSIA, PENNSYLVANIA 19406	
ATTORNEY DOCKET NUMBER:	VN54166	
NAME OF SUBMITTER:	ARLENE E CANNON	
SIGNATURE:	/Arlene E. Cannon/	
DATE SIGNED:	06/17/2016	
Total Attachments: 7		
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PATENT ASSIGNMENT

This PATENT ASSIGNMENT ("Assignment"), is dated February 19, 2015 but deemed to have effect on January 5, 2015 (the "Effective Date"), 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, 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 of the Effective Date, 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 European patent applications in the name of IRM LLC listed in **Schedule B** attached hereto, and associated rights; and

WHEREAS, Assignor wishes to assign to Assignee, and Assignee wishes to acquire from Assignor, all of the Assignor's right, title, and interest in and to the patent rights listed in **Schedule B** attached hereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Assignor hereby sells, transfers, conveys, assigns, and delivers to Assignee any and all right, title and interest Assignor holds, or may come to hold, in any jurisdiction world-wide, 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. 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.
3. Assignor hereby covenants and agrees that, at any time and from time to time after the date of this Assignment, at Assignee's request, Assignor shall use all reasonable efforts to take, or cause to be taken, all appropriate action, to do or cause to be done all things necessary, proper, or advisable under applicable Law, and to execute and deliver such documents and other papers, as may be required to grant, sell, convey, assign, transfer, and/or set over to Assignee title to any of the Assigned Patents.

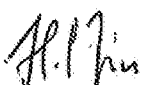
4. This Assignment is binding upon and inures to the benefit of the Parties hereto and their respective successors and assigns. This Assignment and the rights and obligations of the Parties hereunder shall be governed by, and construed in accordance with, the laws of Switzerland.

IN WITNESS WHEREOF, the Parties hereto have caused this Patent Assignment to be executed as of the Effective Date.

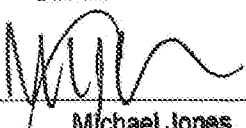
Agreed and accepted by:

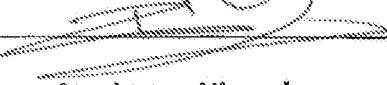
NOVARTIS INTERNATIONAL
PHARMACEUTICAL LTD.

NOVARTIS AG

By: 
Name: H.S. Zivi
Title: Director

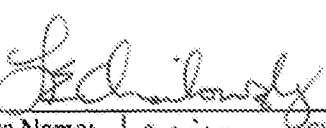
By: 
Name: Thomas Digby
Title: Authorized Signatory

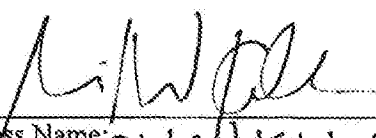
By: 
Name: Michael Jones
Title: Director

By: 
Name: Ian James Hiscock
Title: Authorized Signatory

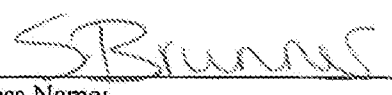
WITNESS to NOVARTIS
INTERNATIONAL PHARMACEUTICAL
LTD.

WITNESS to NOVARTIS AG

By: 
Witness Name: Laurence Chaisovsky

By: 
Witness Name: Michael Keller

By: 
Witness Name: Alicia Lambert

By: 
Witness Name: SARAH BRUNNER

Schedule A

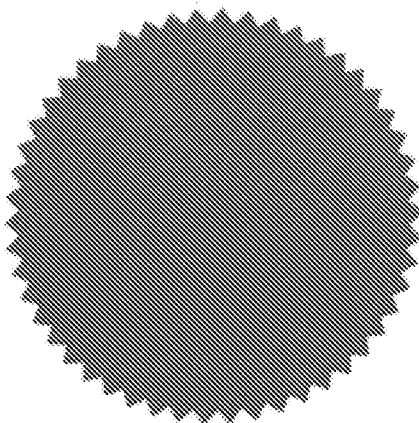


**BERMUDA
CERTIFICATE OF MERGER**

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

A handwritten signature in ink, likely belonging to the Registrar of Companies.

for Registrar of Companies

Schedule B

Schedule B

Case reference	Country	Filing Date	Filing Number	Grant Date	Grant Number	Registered Owners
PAT054113-CA-PCT	Canada	13 Apr 2011	2796314			Novartis AG; IRM LLC; Government
PAT054113-EP-EPT	European Procedure	13 Apr 2011	11716129.9			Novartis AG; IRM LLC; Government
PAT054113-US-PCT	United States of America	13 Apr 2011	13/640832			Novartis AG; IRM LLC; Government
PAT054166-AU-PCT	Australia	01 Sep 2011	2011295853			Novartis AG; IRM LLC
PAT054166-AU-PCTD	Australia	09 Apr 2013	2013203167			Novartis AG; IRM LLC
PAT054166-BE-EPT	Belgium	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-BR-PCT	Brazil	01 Sep 2011	1120130051345			Novartis AG; IRM LLC
PAT054166-CA-PCT	Canada	01 Sep 2011	2810011			Novartis AG; IRM LLC
PAT054166-CH-EPT	Switzerland	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-CN-PCT	China	01 Sep 2011	201180052204.4			Novartis AG; IRM LLC
PAT054166-DE-EPT	Germany	01 Sep 2011	11767839.1	22 Jan 2014	602011004832.5	Novartis AG; IRM LLC
PAT054166-EA-EAT	Eurasian Procedure	01 Sep 2011	201390341			Novartis AG; IRM LLC
PAT054166-EP-ETD	European Procedure	13 Jan 2014	14150998.4			Novartis AG; IRM LLC
PAT054166-ES-EPT	Spain	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-FR-EPT	France	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-GB-EPT	United Kingdom	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-IN-PCT	India	01 Sep 2011	715/KOLNP/2013			Novartis AG; IRM LLC
PAT054166-IT-EPT	Italy	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-JP-PCT	Japan	01 Sep 2011	2013-527322			Novartis AG; IRM LLC
PAT054166-MX-PCT	Mexico	01 Sep 2011	MX/A/2013/002475			Novartis AG; IRM LLC
PAT054166-NL-EPT	Netherlands	01 Sep 2011	11767839.1	22 Jan 2014	EP2480253	Novartis AG; IRM LLC
PAT054166-NZ-PCT	New Zealand	01 Sep 2011	608362			Novartis AG; IRM LLC
PAT054166-SG-PCT	Singapore	01 Sep 2011	201301557-3			Novartis AG; IRM LLC
PAT054166-US-NP	United States of	01 Sep 2011	13/223793			Novartis AG; IRM LLC

Schedule B (cont'd)

Case reference	Country	Filing Date	Filing Number	Grant Date	Grant Number	Registered Owners
PAT054166-US-PCT	United States of	01 Sep 2011	13/820370			Novartis AG; IRM LLC