

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT3321461

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

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

**RECEIVING PARTY DATA**

<b>Name:</b>	NOVARTIS AG
<b>Street Address:</b>	LICHTSTRASSE 35
<b>City:</b>	BASEL
<b>State/Country:</b>	SWITZERLAND
<b>Postal Code:</b>	HM 12

**PROPERTY NUMBERS Total: 37**

Property Type	Number
Patent Number:	7169817
Patent Number:	7893074
Application Number:	13617733
Patent Number:	8552002
Patent Number:	8592432
Patent Number:	7563894
Patent Number:	7638523
Patent Number:	7592349
Patent Number:	7514447
Patent Number:	8466167
Patent Number:	8895577
Patent Number:	8202876
Application Number:	13931111
Patent Number:	8501758
Patent Number:	8859548
Patent Number:	8563553
Patent Number:	8242260
Patent Number:	8710192
Application Number:	13701982
Application Number:	13296343

PATENT

Property Type	Number
Application Number:	13984785
Application Number:	13626207
Application Number:	14511044
Patent Number:	8883819
PCT Number:	US2013070623
Application Number:	14492736
Patent Number:	8871754
PCT Number:	US2013070601
Application Number:	14307515
PCT Number:	US2014026445
Application Number:	14208493
Application Number:	14187214
PCT Number:	US2014024597
Application Number:	14336290
Application Number:	62015848
PCT Number:	US2014047378
Application Number:	62033571

#### CORRESPONDENCE DATA

**Fax Number:**

*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:** 858-812-1525

**Email:** jclarke@gnf.org

**Correspondent Name:** JILL CLARKE

**Address Line 1:** GNF, 10675 JOHN JAY HOPKINS DRIVE

**Address Line 4:** SAN DIEGO, CALIFORNIA 92121

<b>ATTORNEY DOCKET NUMBER:</b>	IRM NAG
<b>NAME OF SUBMITTER:</b>	JILL R CLARKE
<b>SIGNATURE:</b>	/JILL R CLARKE/
<b>DATE SIGNED:</b>	04/22/2015

#### Total Attachments: 6

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## 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 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. 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

By: Kelly Stritenberger  
Name: Kelly Stritenberger, authorized signatory  
Title:

By: Chang Amy Smith  
Name: Chang Amy Smith  
Title: Senior Patent Attorney  
Authorized signatory

By: Denise Cooper  
Name: Denise Cooper, Authorized Signatory  
Title:

By: Daniel Raymond  
Name: DANIEL RAYMOND  
Title: SR PATENT AGENT  
Authorized Signatory

WITNESS to NOVARTIS  
INTERNATIONAL PHARMACEUTICAL  
LTD.

WITNESS to NOVARTIS AG

By: Andrea Sacoun  
Witness Name: Andrea SACOUN

By: Susan Sesnovich  
Witness Name: SUSAN SESNOVICH

By: Cindy Klaprocy  
Witness Name: Cindy Klaprocy

By: Jill R. Clarke  
Witness Name: Jill R. Clarke

**Schedule A**

**(Copy of Certificate of Merger on following page)**



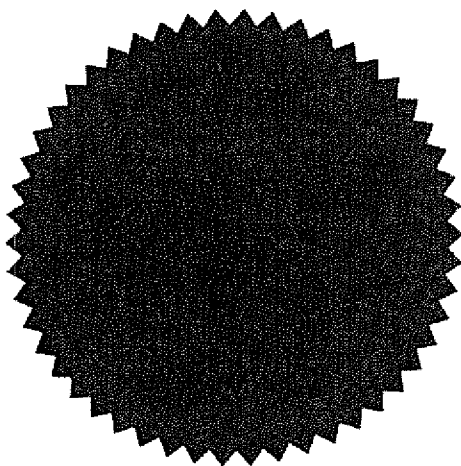
**BERMUDA  
CERTIFICATE OF MERGER**

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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 5<sup>th</sup> day of January 2015.



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

for Registrar of Companies

**Schedule B**

<b>Case reference</b>	<b>Filing Date</b>	<b>Filing Number</b>	<b>Grant Date</b>	<b>Grant Number</b>
PAT032496-US-NP	27 May 2003	10/445967	30 Jan 2007	7169817
PAT032910B-US-PCT	13 Aug 2004	10/568367	22 Feb 2011	7893074
PAT033842-US-CNT	14 Sep 2012	13/617733		
PAT033842-US-PCT	23 Jun 2005	11/570983	08 Oct 2013	8552002
PAT052848-US-PCT	03 Apr 2009	12/936199	26 Nov 2013	8592432
PAT052853-US-CNT	31 Oct 2007	11/932945	21 Jul 2009	7563894
PAT052853-US-CNT03	31 Oct 2007	11/933030	29 Dec 2009	7638523
PAT052853-US-CNT04	31 Oct 2007	11/933056	22 Sep 2009	7592349
PAT052853-US-NP	20 Sep 2006	11/535455	07 Apr 2009	7514447
PAT052856-US-PCT	27 Feb 2009	12/921129	18 Jun 2013	8466167
PAT052856-US-PCTD	22 Apr 2013	13/867752	25 Nov 2014	8895577
PAT052923-US-PCT	24 Sep 2007	12/444129	19 Jun 2012	8202876
PAT053758-US-DIV	28 Jun 2013	13/931111		
PAT053758-US-NP	27 Aug 2010	12/870130	06 Aug 2013	8501758
PAT053763-US-CNT02	10 Sep 2013	14/022540	14 Oct 2014	8859548
PAT053763-US-DIV	16 May 2012	13/473230	22 Oct 2013	8563553
PAT053763-US-NP	24 Aug 2010	12/862418	14 Aug 2012	8242260
PAT053967-US-NP	10 Dec 2010	12/965743	29 Apr 2014	8710192
PAT054100-US-PCT	28 Jun 2011	13/701982		
PAT054412-US-NP	15 Nov 2011	13/296343		
PAT054416-US-PCT	10 Feb 2012	13/984785		
PAT054621-US-NP	25 Sep 2012	13/626207		
PAT054757-US-DIV	09 Oct 2014	14/511044		
PAT054757-US-NP	30 Aug 2012	13/599267	11 Nov 2014	8883819
PAT054787-WO-PCT	18 Nov 2013	PCT/US2013/070623		
PAT054788-US-CNT	22 Sep 2014	14/492736		
PAT054788-US-NP	18 Nov 2013	14/083203	28 Oct 2014	8871754
PAT054788-WO-PCT	18 Nov 2013	PCT/US2013/070601		
PAT055493-US-NP	18 Jun 2014	14/307515		
PAT055535-WO-PCT	13 Mar 2014	PCT/US2014/026445		

Case reference	Filing Date	Filing Number	Grant Date	Grant Number
PAT055596-US-NP	13 Mar 2014	14/208493		
PAT055599-US-NP	21 Feb 2014	14/187214		
PAT055643-WO-PCT	12 Mar 2014	PCT/US2014/024597		
PAT055781-US-NP	21 Jul 2014	14/336290		
PAT055781-US-PSP02	23 Jun 2014	62/015848		
PAT055781-WO-PCT	21 Jul 2014	PCT/US2014/047378		
PAT056353-US-PSP	05 Aug 2014	62/033571		