502459484 08/15/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NOVARTIS PHARMA AG	01/19/2009

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12099302

CORRESPONDENCE DATA

9737818064 Fax Number:

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

pip_inbox.phchbs@novartis.com

Correspondent Name: **NOVARTIS**

Address Line 1: MICHAEL J. MAZZA

Address Line 2: ONE HEALTH PLAZA, BLDG. 101

Address Line 4: EAST HANOVER, NEW JERSEY 07936-1080

ATTORNEY DOCKET NUMBER:	PAT053421-US-CNT02
NAME OF SUBMITTER:	Michael J. MAZZA
Signature:	/Michael J. Mazza/
Date:	08/15/2013

Total Attachments: 4

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> **PATENT REEL: 031017 FRAME: 0164**

502459484

ASSIGNMENT

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we

Novartis Pharma AG, a company organized under the laws of the Switzerland, of Lichtstrasse 35, CH-4002, Basel, Switzerland

do hereby sell, assign and transfer to Novartis AG, a company organized under the laws of the Swiss Confederation, of Lichtstrasse 35, 4056 Basel, Switzerland, and its successors, assigns and legal representatives, all of our right, title and interest for all countries of the world (Novartis AG hereinafter referred to collectively as the "ASSIGNEES") in and to those patents and patent applications set forth on Schedules A and B hereto (collectively, the "ASSIGNED PATENTS"), as well as any extensions, divisions, reexaminations, reissues and continuations thereof and any applications or patents that claim priority from such patents and applications, including any foreign counterparts thereto, and all rights, claims and privileges pertaining to any of the foregoing.

Executed this _	day o	Janua	20	<u>05</u>			
	PHARMA AG						
W. Muchy June Vislas	(Jau	المالا	L.S.				
June Vielas	L MENTEL	Arthor	· CaNON	31CA			
Duly autho	nied sig.	navori	~~				
ACKNOWLED	GEMENT						
State of)					
County of) s.s.:)					
On this	day of to me known	and known	, 20	, personall	y appeared t	before me	executed
the foregoing / purpose set fo	Assignment and a	and known cknowledge	ed that (s)he	executed the	same of his	(her) own free	will for the
(Seal)							

Notary Public

Attestation

I, the undersigned notary public of Basel, Switzerland, Dr. Matthias Staehelin, certify herewith that the above signatures are the genuine signatures of **Ms. June Violet Mentel**, citizen of Grenchen/SO, Switzerland, residing in Arlesheim/BL, Switzerland, and of **Mr. Arthur Canonica**, citizen of Corticiasca/TI, Switzerland, residing in Wisen/SO, Switzerland, both acting for **Novartis Pharma AG**, in Basel, Switzerland, both as proxy holders, both with joint signature.

The authenticity of the signatures was established by means of comparison.

Basel, Switzerland, this 21st (twenty-first) day of January 2009 (two thousand and nine)

THIAS STARTED IN

M. Stacker Notes

Dr. M. Stachelin

Notar

Leg. Prot. Nr. 295 /2009

PATENT REEL: 031017 FRAME: 0166

SCHEDULE A TO ASSIGNMENT

[See Attachment]

PATENT REEL: 031017 FRAME: 0167

MATTER NO	COUNTRY ID	SERIAL NO	PATENT	PUBLNO	TITLE	RELATED	STATUS	FILE:	PUBL	ISSUE	EXPIRATION
016770- 005612US	US	N/A	Maria de la Companya		METHODS AND SYSTEMS FOR OPERATING AN AEROSOL GENERATOR		expired	1 /8 /2003			1 /8 /2004
016770- 005630US	ÜS	10/996,994	7,331,339	US 2005- 0172954A1	AEROSOL GENERATOR	005620US	ISSUED	11/23/200 4	8 /11/2005	2 /19/2008	8 /9 /2022
016770- 005640US	US	11/928,214		US-2008- 0060641-A1	METHODS AND SYSTEMS FOR OPERATING AN AEROSOL GENERATOR	016770- 005630US	PUBLISHED	10/30/200 7			3 /20/2021
016770- 005700U\$	US				PIEZOELECTRIC POLYMER AEROSOL PUMP	n/a	ABANDONED				12/10/2005
01677 0- 005800US	US	n/a			No title	n/a	ABANDONED				12/10/2005
016770- 005900US	US				BREATH HUMIDITY MEASUREMENT	n/a	ABANDONED				12/10/2005
016770- 006000US	US	29/153,493	D469,866		INHALER FOR DISPENSING MEDICATIONS		ISSUED	1 /7 /2002		2 /4 /2003	2 /4 /2017
016770- 006100US	US	29/153,494	D474,536		INHALER FOR DISPENSING MEDICATIONS		ISSUED	1 /7 /2002		5 /13/2003	5 /13/2017
016770- 006200US	US	29/153,495	D471,273		INHALER FOR DISPENSING MEDICAMENTS		ISSUED	1 <i>17 1</i> 2002		3 /4 /2003	3 /4 /2017
016770- 006300US	US	29/153,496	D479,745		INHALER FOR DISPENSING MEDICATIONS		ISSUED	1 /7 /2002		9 /16/2003	9 /16/2017
016770- 006500US	US	60/346,789			DEVICES & METHODS FOR NEBULIZING FLUIDS FOR INHALATION		EXPIRED	1 /7 /2002			1 <i>/7 /</i> 2003
016770- 006511US	US	10/338,194	7,360,536	US200301504 46	DEVICES & METHODS FOR NEBULIZING FLUIDS FOR INHALATION	016770- 006500US	ISSUED	1 /7 /2003	8 /14/2003	4 /2 /2008	8 /22/2025
016770- 006512US	US	12/099,302		US-2008- 0184993-A1	DEVICES & METHODS FOR NEBULIZING FLUIDS FOR INHALATION	016770- 006511US	PUBLISHED	4 /8 /2008	8 /7 /2008		1 /7 /2023
016770- 006510U\$	US	60/403,454			DEVICES & METHODS FOR NEBULIZING FLUIDS FOR INHALATION		EXPIRED	8 /13/2002			8 /13/2003
016770- 006600US	US	60/382,256			APPARATUS AND METHOD FOR PROVIDING AEROSOL FOR MEDICAL TREATMENT		EXPIRED	5 /20/2002			5 /20/2003