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:	10284960

CORRESPONDENCE DATA

Fax Number: (973)781-8064

Email: pip_inbox.phchbs@novartis.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

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: PAT053272-US-CNT

NAME OF SUBMITTER: MICHAEL J. MAZZA

Total Attachments: 4

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REEL: 027047 FRAME: 0344

10284960

501688029

PATENT

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.

E	executed this day of facuary 2005.
)	NOVARTIS PHARMA AG
M.M.	Intel (allow 18
Ju	ine Violet FRENTEL ANTHON CANONICA
7)4	by authorized signatories
4	ACKNOWLEDGEMENT
\$	State of)
() s.s.: County of)
	On this day of, 20, personally appeared before me to me known and known by me to be the same person described in and who executed
1	the foregoing Assignment and acknowledged that (s)he executed the same of his (her) own free will for the purpose set forth.
,	(Seal)

PATENT REEL: 027047 FRAME: 0345

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)

TO TAR BASEL

M. Stacker Notes

Dr. M. Stachelin

Notar

Leg. Prot. Nr. 295 /2009

PATENT REEL: 027047 FRAME: 0346

SCHEDULE A TO ASSIGNMENT

[See Attachment]

PATENT REEL: 027047 FRAME: 0347

MATTER	COUNTRY	SERIAL NO	PATENT NO	PUBLNO	ÎŢĻĒ	RELATEÓ	STATUS	FLE	PUBL	ISSUE	EXPIRATION
0091,00	US	10/174,478			FLOW REGULATOR FOR AEROSOL DRUG DELIVERY DEVICE AND METHODS	0091.PRO	ABANDONED	6 /18/2002			1 /26/2003
0091.01	US	10/257,745	7,185,651		FLOW REGULATOR FOR AEROSOL DRUG DELIVERY AND METHODS	0091.PCT	ISSUED	5 /14/2003	1/1/2004	3 /6 /2007	8 /18/2023
0089.PRO ·	us	60/299,694			PASSIVE POWDER AEROSOL DELIVERY SYSTEM AND METHODS		EXPIRED .	6 /20/2001			6 /20/2002
0089.00	US	10/175,145		US 2003- 0035777 A1	POWDER AEROSOLIZATION APPARATUS AND METHOD	0089.PRO	PUBLISHED	6 /19/2002	2 /20/2003		6 /19/2022
0134.PRO	us	60/333,729			INHALATION SURFACTANT THERAPY		EXPIRED	11/27/200 1			11/27/2002
0134.00 AJ	US	10/302,553			INHALATION SURFACTANT THERAPY	0134.PRO	ABANDONED	11/22/200 2	5 /29/2003		10/12/2007
0085.PRO	US	60/336,538			MULTI-NOZZLE SONIC GAS-ASSISTED LIQUID ATOMIZER		EXPIRED	11/1 /2001			11/1 /2002
0085.00 TP	US	10/284,960		US 2003- 0124193	SPRAY DRYING METHODS AND RELATED COMPOSITIONS	0085.PRO	PUBLISHED	10/31/200 2	7 /3 /2003		10/31/2022
0140.PRO	US	60/336,320			AEROSOL DELIVERY (MOUTHPIECE JOINT)		EXPIRED	11/14/200 1			11/14/2002
0140.00	US	10/298,177		US 2003- 0150454	AEROSOLIZATION APPARATUS WITH REMOVABLE MOUTHPIECE	0140.PRO	PUBLISHED	11/14/200 2	/14/2003		11/14/2022
0141.PRO	US	60/336,541			IMPROVEMENTS IN AEROSOL DELIVERY (MOUTHPIECE SOLE)		EXPIRED	11/14/200 1			11/14/2002
0141.00	บร	10/295,783		US 2003- 0094173 A1	AEROSOLIZATION DEVICE WITH IMPROVED ENDPIECE CONNECTION		PUBLISHED	11/ 14/2 00 2	/22/2003		11/14/2022
0142.PRO	US	60/336,237			AEROSÓL DELIVERY (MOUTHPIEGE COMBINED)	100	PENDING	11/14/200 1			
0094.PRO	US -	60/298,238			CENTRIFUGED ROTATING DRUM FOR TREATING COHESIVE POWDERS		EXPIRED	6 /13/2001			6/13/2002