503188391 02/20/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3235008

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAVID HOOK	12/12/2007
THOMAS RUCH	12/17/2007
BERNHARD RISS	12/12/2007
BERNHARD WIETFELD	12/12/2007
GOTTFRIED SEDELMEIER	12/12/2007
MATTHIAS NAPP	12/13/2007
MARKUS BANZIGER	12/13/2007
STEVEN HAWKER	04/01/2008
LECH CISZEWSKI	03/20/2008
LILADHAR MURLIDHAR WAYKOLE	03/14/2008

RECEIVING PARTY DATA

Name:	Novartis AG
Street Address:	Lichtstrasse 35
City:	Basel
State/Country:	SWITZERLAND
Postal Code:	4056

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	14224700
Application Number:	14627542

CORRESPONDENCE DATA

Fax Number: (973)781-8064

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: 862-778-5806

Email: pip_inbox.phchbs@novartis.com

Correspondent Name: DAVID KURLANDSKY

Address Line 1: NOVARTIS PHARMACEUTICALS CORPORATION

Address Line 2: ONE HEALTH PLAZA, BLDG 101

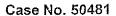
Address Line 4: EAST HANOVER, NEW JERSEY 07936

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503188391 REEL: 034996 FRAME: 0586

ATTORNEY DOCKET NUMBER:	PAT050481-PCTD02 PCTD03
NAME OF SUBMITTER:	DENISE COOPER
SIGNATURE:	/Denise Cooper/
DATE SIGNED:	02/20/2015
Total Attachments: 22	
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ASSIGNMENT

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

David HOOK	citizen of United Kingdom	Dianastrasse 12
		4310 Rheinfelden
		СН
Thomas RUCH	citizen of Germany	Fasanenstr. 13
		4402 Frenkendorf
		СН
Bernhard RISS	citizen of France	Rue du Dr. Mangeney 44
		68330 Huningue
		FR
Bernhard WIETFELD	citizen of Germany	Dichleweg 27
,		79588 Efringen-Kirchen
,		DE
Gottfried SEDELMEIER	citizen of Germany	Erlenweg 11
		79227 Schallstadt
		DE .
Matthias NAPP	citizen of Germany	Pestalozzistrasse 57
		DE-79540 Lörrach
		GERMANY
Markus BÄNZIGER	citizen of Switzerland	Dahlienstrasse 27
		4416 Bubendorf
		СН
Steven HAWKER	citizen of United Kingdom	24 Meibourn Rd.
		Royston, Hertfordshire
		UK
Lech CISZEWSKI	citizen of Poland	7 Hamilton Road, Apt. 2H
		Morristown, NJ 07960
	4	US
Liladhar Murlidhar	citizen of United States Of	11 Putters Road
WAYKOLE	America	Succasunna, NJ 07876
•		USA

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 our right, title and interest for all countries of the world (Novartis AG hereinafter referred to as the "ASSIGNEE") in and to (1) all of our inventions and discoveries described in the patent application(s) entitled

NEW PROCESS

filed* in the RO/	on	20	, and accorded	International	Patent Ani	olication
med in the NOI	OII		•			•
Number PCT		_. , (2) said pat	ent application(s	i), (3) all natio	onal stages	of said
international patent app						
priority of the Europea						
07100451.9, (5) all o						
continuations and divisi						
divisions), ((2)-(5) herei	nafter referred to col	lectively as "pa	atent applications	s"), (6) all pate	nts that are	granted
on any of said patent ap	plications, (7) all reg	istrations and	confirmations of,	and importation	on certificate	es

based on, one or more of said patents and (8) all reissues, renewals and extensions of said patents, reexamination certificates issued for said patents and supplementary protection certificates based on said patents (including the right to file patent applications on said inventions and discoveries in the names of **ASSIGNEE**, their designees or in any or all of our names, at their election and in accordance with applicable law in all countries and regions and all rights of priority in all countries and regions for all of said patent applications under the International Convention for the Protection of Industrial Property, and all other applicable similar international agreements), the same to be held and enjoyed by said **ASSIGNEE**, their successors, assigns and legal representatives, to the full ends of the terms for which all patents therefor may be granted, as fully and entirely as the same would have been held and enjoyed by us if this sale, assignment and transfer had not been made.

*We hereby authorize ASSIGNEE and their representatives to insert in this instrument the Application Number and the filing date of said patent application when notified thereof.

And we hereby covenant and agree that we will, at any time, upon the request and at the expense of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, patent applications, patents, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates and supplementary protection certificates in ASSIGNEE, their successors, assigns or other legal representatives, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, that we will, at any time, upon the request and at the expense of ASSIGNEE, execute all additional patent applications, applications for registration and/or confirmation of one or more of said patents, applications for certificates of importation based on one or more of said patents, applications for reissues, renewals and extensions of one or more of said patents and supplemental protection certificates based upon one or more of said patents, and that we will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE, the successors, assigns or other legal representatives.

Executed this 12th day of DECEMBER, 2007.

L.S.

Name: David HOOK

Executed this 17 day of December,	20 <u>07</u> .
Name: Thomas RUCH	_L.S.
Executed this 12 day of Decum fin,	20 <u>07</u> .
Benkerd Der Name: Bernhard RISS	_ L.S.
Executed this <u>12</u> day of <u>Dece in 5cr</u>	20 <u>07</u> .
Bein Laid Wieffeld Name: Bernhard WIETFELD	_ L.S.
Executed this 12 day of Decearbor	. 20 <u>07 </u> .
Name: Gottfried SEDELMEIER	_, L.S.
Executed this 13 day of December	, 20 <u>07</u> .
Mame: Matthias NAPP	_L.S.
Executed this 13 day of 1een 12	, 20 <u>07</u>
Name: Markus BÄNZIGER	_ L.S.
Executed this day of	, 20
Name: Steven HAWKER	Ł.S.

Case No. 50481	4
Executed this day of	_, 20
Name: Lech CISZEWSKI	L.S.
Executed this day of	, 20
Name: Liladhar Murlidhar WAYKOLE	L.S.

ACCEPTANCE OF ASSIGNMENT

With reference to the Assignment to NOVARTIS AG of an invention entitled "NEW PROCESS" signed by David HOOK; Thomas RUCH; Bernhard RISS; Bernhard WIETFELD; Gottfried SEDELMEIER; Matthias NAPP; Markus BÄNZIGER; Steven HAWKER; Lech CISZWEKSKI; Liladhar Murlidhar WAYKOLE; this will certify that NOVARTIS AG accepts such Assignment.

NOVARTIS AG

Ву:

S DELLER

C. PULISOMME

Name:

10 ME EVPERT DE

10.12. 200-----

Function:

10 10 0

Date:

17.12.2007

Attestation

I, the undersigned notary public of Basel, Switzerland, certify herewith the authenticity of the signatures of **Mr. David Hook**, British citizen, residing in Rheinfelden, Switzerland; of **Mr. Thomas Ruch**, German citizen, residing in Frenkendorf, Switzerland; of **Mr. Bernhard Riss**, French citizen, residing in Huningue, France; of **Mr. Bernhard Wietfeld**, German citizen, residing in Efringen-Kirchen, Germany; of **Mr. Gottfried Sedelmeier**, German citizen, residing in Schallstadt, Germany; of **Mr. Matthias Napp**, German citizen, residing in Lörrach, Germany; and of **Mr. Markus Bänziger**, citizen of Heiden/AR, Switzerland, residing in Bubendorf, Switzerland.

I further certify that the above signatures are the genuine signatures of **Ms. Sabine Zeller**, citizen of Ormalingen/BL, Switzerland, residing in Gelterkinden/BL, Switzerland; and of **Ms. Ella Rutschmann**, citizen of Lotzwil, Switzerland, residing in Basel, Switzerland; both acting for **Novartis AG**, in Basel, Switzerland, both as proxy holders, both with joint signature.

The authenticity of the signatures was established by comparison.

BASEL, Switzerland, this 20^{th} (twentieth) day of December 2007 (two thousand and seven).

Dr. M. Staehelin Notar

by . Stadel , Who

Leg.Prot.Nr. 2060/2007

FOR CERTIFIED COPY

I, the undersigned Civil Law Notary of Basel, Switzerland, Dr. Thomas Gelzer, hereby certify that the document attached heretofore is a true and authentic photocopy of the original.

BASEL, Switzerland, this 19th (nineteenth) day of June 2009 (two thousand and nine)

Dr. Th. Gelzer

Leg.Prot.Nr. 278 /2009



Case No. 50481

ASSIGNMENT

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

David HOOK	citizen of United Kingdom	Dianastrasse 12
		4310 Rheinfelden
		СН
Thomas RUCH	citizen of Germany	Fasanenstr. 13
		4402 Frenkendorf
•		СН
Bernhard RISS	citizen of France	Rue du Dr. Mangeney 44
		68330 Huningue
		FR
Bernhard WIETFELD	citizen of Germany	Dichleweg 27
		79588 Efringen-Kirchen
		DE
Gottfried SEDELMEIER	cilizen of Germany	Erlenweg 11
		79227 Schallstadt
		DE
Matthias NAPP	citizen of Germany	Pestalozzistrasse 57
		DE-79540 Lörrach
		GERMANY
Markus BÄNZIGER	citizen of Switzerland	Dahlienstrasse 27
		4416 Bubendorf
		СН
Steven HAWKER	citizen of United Kingdom	24 Melbourn Rd.
		Royston, Hertfordshire
		UK
Lech CISZEWSKI	citizen of Poland	7 Hamilton Road, Apt. 2H
		Morristown, NJ 07960
		US
Liladhar Murlidhar	citizen of United States Of	11 Putters Road
WAYKOLE	America	Succasunna, NJ 07876
		USA

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 our right, title and interest for all countries of the world (Novartis AG hereinafter referred to as the "**ASSIGNEE**") in and to (1) all of our inventions and discoveries described in the patent application(s) entitled

NEW PROCESS

filed* in the ROI	on	, 20,	and accorded	International	Patent .	Application
Number PCT		(2) said pate	ent application(s), (3) all natio	onal stag	ges of said
nternational patent app	lication. (4) all oth	er patent applic	cations in all co	untries and re	egions cl	aiming the
oriority of the Europea:	n patent applicatio	n filed on 12 J	anuary 2007 ar	nd accorded /	Application	on Number
07100451.9 (5) all co	entinuations and o	divisions of all	of said paten	t applications	(incing	ing further
continuations and division	ons such as, but n	at limited to, co	intinuations of c	ontinuations a	nd conti	nuations of
divisions) ((2)-(5) hereir	nafter referred to co	llectively as "pa	tent applications	s"), (6) all pate	nts that a	are granted
on any of said patent ap	plications, (7) all re	gistrations and	confirmations of,	and importati	on certifi	cates

based on, one or more of said patents and (8) all reissues, renewals and extensions of said patents, reexamination certificates issued for said patents and supplementary protection certificates based on said patents (including the right to file patent applications on said inventions and discoveries in the names of ASSIGNEE, their designees or in any or all of our names, at their election and in accordance with applicable law in all countries and regions and all rights of priority in all countries and regions for all of said patent applications under the International Convention for the Protection of Industrial Property, and all other applicable similar international agreements), the same to be held and enjoyed by said ASSIGNEE, their successors, assigns and legal representatives, to the full ends of the terms for which all patents therefor may be granted, as fully and entirely as the same would have been held and enjoyed by us if this sale, assignment and transfer had not been made.

*We hereby authorize ASSIGNEE and their representatives to insert in this instrument the Application Number and the filing date of said patent application when notified thereof.

And we hereby covenant and agree that we will, at any time, upon the request and at the expense of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, patent applications, patents, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates and supplementary protection certificates in ASSIGNEE, their successors, assigns or other legal representatives, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, that we will, at any time, upon the request and at the expense of ASSIGNEE, execute all additional patent applications, applications for registration and/or confirmation of one or more of said patents, applications for reissues, renewals and extensions of one or more of said patents and supplemental protection certificates based upon one or more of said patents, and that we will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE, the successors, assigns or other legal representatives.

Executed this day of		_, 20
	,	L.S.
Name: David HOOK		

L.S. 01.04.2008.

V.R.H. GARLING M.A., CANTA

BROADWAY CHAMBERS LETCHWORTH, HERTS SG6 3AB

Case No. 50481	4
Executed this day of	, 20
Name: Lech CISZEWSKI	L.S.
Executed this day of	, 20
Name: Liladhar Murlidhar WAYKOLE	L.S.

ACCEPTANCE OF ASSIGNMENT

With reference to the Assignment to NOVARTIS AG of an invention entitled "NEW PROCESS" signed by David HOOK; Thomas RUCH; Bernhard RISS; Bernhard WIETFELD; Gottfried SEDELMEIER; Matthias NAPP; Markus BÄNZIGER; Steven HAWKER; Lech CISZWEKSKI; Liladhar Murlidhar WAYKOLE; this will certify that NOVARTIS AG accepts such Assignment.

NOVARTIS AG

Ву:

Name

Function:

Date:

OF ARRIL 2008

PATENT

REEL: 034996 FRAME: 0599

Attestation

I, the undersigned, notary public of Basel, Switzerland, Dr. Roland M. Müller, certify herewith the authenticity of the signatures of **Ms. Ella Rutschmann**, citizen of Lotzwil/BE, Switzerland, residing in Basel/BS, Switzerland, and of **Ms. Sabine Zeller**, citizen of Ormalingen/BL, Switzerland, residing in Gelterkinden/BL, Switzerland, both acting for **Novartis 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 9th (ninth) day of April 2008 (twothousandandeight)

Dr. R.M. Müller Notar

Leg.Prot.Nr. 457/2008

FOR CERTIFIED COPY

I, the undersigned Civil Law Notary of Basel, Switzerland, Dr. Thomas Gelzer, hereby certify that the document attached heretofore is a true and authentic photocopy of the original.

BASEL, Switzerland, this 19th (nineteenth) day of June 2009 (two thousand and nine)

Dr. Th. Gelzer

Leg.Prot.Nr. Z60 /2009



ASSIGNMENT

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

David HOOK	citizen of United Kingdom	Dianastrasse 12	
		4310 Rheinfelden	
		СН	
Thomas RUCH	citizen of Germany	Fasanenstr. 13	
		4402 Frenkendorf	
		СН	
Bernhard RISS	citizen of France	Rue du Dr. Mangeney 44	
		68330 Huningue	
		FR	
Bernhard WIETFELD	citizen of Germany	Dichleweg 27	
		79588 Efringen-Kirchen	
		DE	
Gottfried SEDELMEIER	citizen of Germany	Erlenweg 11	
		79227 Schallstadt	i
		DE	,
Matthias NAPP	citizen of Germany	Pestalozzistrasse 57	
		DE-79540 Lörrach	
		GERMANY	
Markus BÄNZIGER	citizen of Switzerland	Dahlienstrasse 27	
		4416 Bubendorf	
		СН	
Steven HAWKER	citizen of United Kingdom	24 Melbourn Rd.	\dashv
		Royston, Hertfordshire	
		UK	ĺ
ech CISZEWSKI	citizen of Poland	7 Hamilton Road, Apt. 2H	-
		Morristown, NJ 07960	E
		us	Ì
iladhar Murlidhar VAYKOLE	citizen of United States Of	11 Putters Road	\dashv
WAINOLE	America	Succasunna, NJ 07876	
	,	USA	

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 our right, title and interest for all countries of the world (Novartis AG hereinafter referred to as the "ASSIGNEE") in and to (1) all of our inventions and discoveries described in the patent application(s) entitled

NEW PROCESS

filed* in the ROLEP on 10, AN., 20 08, and accorded International Patent Application Number PCT/EP208/000142 (2) said patent application(s), (3) all national stages of said international patent application, (4) all other patent applications in all countries and regions claiming the priority of the European patent application filed on 12 January 2007 and accorded Application Number 07100451.9, (5) all continuations and divisions of all of said patent applications (including further continuations and divisions such as, but not limited to, continuations of continuations and continuations of divisions), ((2)-(5) hereinafter referred to collectively as "patent applications"), (6) all patents that are granted on any of said patent applications, (7) all registrations and confirmations of, and importation certificates

based on, one or more of said patents and (8) all reissues, renewals and extensions of said patents, reexamination certificates issued for said patents and supplementary protection certificates based on said patents (including the right to file patent applications on said inventions and discoveries in the names of ASSIGNEE, their designees or in any or all of our names, at their election and in accordance with applicable law in all countries and regions and all rights of priority in all countries and regions for all of said patent applications under the International Convention for the Protection of Industrial Property, and all other applicable similar international agreements), the same to be held and enjoyed by said ASSIGNEE, their successors, assigns and legal representatives, to the full ends of the terms for which all patents therefor may be granted, as fully and entirely as the same would have been held and enjoyed by us if this sale, assignment and transfer had not been made.

*We hereby authorize **ASSIGNEE** and their representatives to insert in this instrument the Application Number and the filing date of said patent application when notified thereof.

And we hereby covenant and agree that we will, at any time, upon the request and at the expense of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, patent applications, patents, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates and supplementary protection certificates in ASSIGNEE, their successors, assigns or other legal representatives, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, that we will, at any time, upon the request and at the expense of ASSIGNEE, execute all additional patent applications, applications for registration and/or confirmation of one or more of said patents, applications for certificates of importation based on one or more of said patents, applications for reissues, renewals and extensions of one or more of said patents and supplemental protection certificates based upon one or more of said patents, and that we will make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE, the successors, assigns or other legal representatives.

Executed this	day of		, 20
		,	
			L.S.
Name: David HOC	ЭK		

Case No. 50481

Executed this day of	, 20
Name: Thomas RUCH	
Executed this day of	, 20
Name: Bernhard RISS	L.S.
Executed this day of	, 20
Name: Bernhard WIETFELD	L.S.
Executed this day of	, 20
Name: Gottfried SEDELMEIER	L.S.
Executed this day of	, 20
Name: Matthias NAPP	, Ł.S.
Executed this day of	, 20
Name: Markus BÄNZIGER	L.S.
Executed this day of	, 20
Name: Steven HAWKER	L.S.

Case	No	50481
V435	TAU.	- OU-+0 1

4

Executed this 20 day of Morch, 2008.

Name: Lech CISZEWSKI

Executed this 4 day of March, 2008

Name: Liladhar Murlidhar WAYKOLE

STATE OF **NEW JERSEY**)

)ss:

COUNTY OF MORRIS

Before me, on the 20th day of March 2008, personally appeared Lech Ciszewski,

and

Before me, on the 14th day of March 2008, personally appeared **Liladhar Murlidhar Waykole**,

both known to me and known to be the person(s) named in the attached document, duly signed and executed the same.

Sworn and subscribed to before me the 2012 14 th day of March , 2008

Duanteen CM Lee Notary

> MAUREEN C. McGEE NOTARY PUBLIC STATE OF NEW JERSEY My Commission Expires Jan. 23, 2010

Seal

ACCEPTANCE OF ASSIGNMENT

With reference to the Assignment to NOVARTIS AG of an invention entitled "NEW PROCESS" signed by David HOOK; Thomas RUCH; Bernhard RISS; Bernhard WIETFELD; Gottfried SEDELMEIER; Matthias NAPP; Markus BÄNZIGER; Steven HAWKER; Lech CISZWEKSKI; Liladhar Murlidhar WAYKOLE; this will certify that NOVARTIS AG accepts such Assignment.

NOVARTIS AG

By:

Name :

Function:

Date:

I MARCH 2-08

Attestation

I, the undersigned, **Dr. Matthias Staehelin**, notary public in Basel, Switzerland, certify herewith that the above signatures are the genuine signatures of **Mr. Reto Halbeisen**, citizen of Wahlen/BL, Switzerland, residing in Laufen/BL, Switzerland, and **Ms. Sabine Zeller**, citizen of Ormalingen/BL, Switzerland, residing in Gelterkinden/BL, Switzerland, both acting for **Novartis 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 4th (fourth) day of April 2008 (twothousandandeight).

M. Machel, Note

Dr. M. Staehelin

Leg.Prot.Nr. 602 /2008

FOR CERTIFIED COPY

I, the undersigned Civil Law Notary of Basel, Switzerland, Dr. Thomas Gelzer, hereby certify that the document attached heretofore is a true and authentic photocopy of the original.

BASEL, Switzerland, this 19th (nineteenth) day of June 2009 (two thousand and nine)

Dr. Th. Gelzer

Leg.Prot.Nr. 769 /2009