PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4695534

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	BELEASE OF SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
ORBIMED ROYALTY OPPORTUNITIES II, LP	11/17/2017

RECEIVING PARTY DATA

Name:	RECRO GAINESVILLE LLC (F/K/A RECRO TECHNOLOGY LLC)
Street Address:	1300 GOULD DRIVE
City:	GAINESVILLE
State/Country:	GEORGIA
Postal Code:	30504

PROPERTY NUMBERS Total: 17

Property Type	Number
Patent Number:	5834025
Patent Number:	RE41884
Patent Number:	7459283
Patent Number:	8323641
Patent Number:	8652464
Patent Number:	8512727
Patent Number:	8992973
Patent Number:	6908626
Patent Number:	6228398
Patent Number:	6902742
Patent Number:	6730325
Patent Number:	6793936
Patent Number:	9308177
Application Number:	14182097
Application Number:	13941076
Application Number:	11372857
Application Number:	10827689

CORRESPONDENCE DATA

Fax Number: (704)378-2057

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

PATENT

504648813 REEL: 044164 FRAME: 0008

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ATTORNEY DOCKET NUMBER:	036251.000040
NAME OF SUBMITTER:	PETER B. STEWART
SIGNATURE:	/Peter B. Stewart/
DATE SIGNED:	11/17/2017

Total Attachments: 16

source=RecroGainesville-Release-Patent-Security-Interest#page1.tif source=RecroGainesville-Release-Patent-Security-Interest#page2.tif source=RecroGainesville-Release-Patent-Security-Interest#page3.tif source=RecroGainesville-Release-Patent-Security-Interest#page4.tif source=RecroGainesville-Release-Patent-Security-Interest#page5.tif source=RecroGainesville-Release-Patent-Security-Interest#page6.tif source=RecroGainesville-Release-Patent-Security-Interest#page7.tif source=RecroGainesville-Release-Patent-Security-Interest#page8.tif source=RecroGainesville-Release-Patent-Security-Interest#page9.tif source=RecroGainesville-Release-Patent-Security-Interest#page10.tif source=RecroGainesville-Release-Patent-Security-Interest#page11.tif source=RecroGainesville-Release-Patent-Security-Interest#page12.tif source=RecroGainesville-Release-Patent-Security-Interest#page13.tif source=RecroGainesville-Release-Patent-Security-Interest#page14.tif source=RecroGainesville-Release-Patent-Security-Interest#page15.tif source=RecroGainesville-Release-Patent-Security-Interest#page16.tif

RELEASE OF SECURITY INTEREST IN PATENTS

This RELEASE OF SECURITY INTEREST IN PATENTS (this "Release") is made and effective as of November 17, 2017 and granted by ORBIMED ROYALTY OPPORTUNITIES II, LP, a Delaware limited partnership (together with its Affiliates, successors, transferees and assignees, the "Lender"), as lender under the Credit Agreement referred to below, in favor of RECRO GAINESVILLE LLC (f/k/a RECRO TECHNOLOGY LLC), a Massachusetts limited liability company (the "Grantor") and its successors, assigns and legal representatives.

WHEREAS, pursuant to that certain Credit Agreement, dated as of March 7, 2015 (as amended, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and between the Grantor and the Lender, the Grantor executed and delivered to the Lender (i) that certain Pledge and Security Agreement, dated as of April 10, 2015 (the "Pledge & Security Agreement"), by and among Recro Pharma, Inc., a Pennsylvania corporation, the Grantor and the Lender and (ii) that certain Patent Security Agreement, dated as of April 10, 2015 (the "Patent Security Agreement" and together with the Pledge & Security Agreement, the "Security Agreements");

WHEREAS, pursuant to the Security Agreements, the Grantor pledged and granted to the Lender for its benefit a security interest in and to all of the right, title and interest of such Grantor in, to and under the Patent Collateral (as defined in the Patent Security Agreement);

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office at Reel 035403, Frame 0288 on April 14, 2015; and

WHEREAS, the Lender wishes to provide a document evidencing the release, relinquishment and discharge of its security interest in the Patent Collateral.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Lender hereby states as follows:

- 1. Release of Security Interest. The Lender, on behalf of itself and its successors, legal representatives and assigns, hereby terminates the Patent Security Agreement and terminates, releases and discharges any and all security interests that it has pursuant to the Patent Security Agreement in any and all right, title and interest of the Grantor, and reassigns to the Grantor any and all right, title and interest that it may have, in, to and under the Patent Collateral (including the patents and patent licenses listed on **Schedule 1** and **Schedule 2**hereto).
- 2. <u>Authorization</u>. The Lender hereby authorizes and requests the United States Patent and Trademark Office and any other applicable government officer to record this Release.

NY: 1079752-3

- 3. <u>Further Assurances</u>. The Lender agrees, at the Grantor's expense, to take all further actions, and provide to the Grantor and its successors, assigns and legal representatives all such cooperation and assistance, including, without limitation, the execution and delivery of any and all further documents or other instruments, as the Grantor and its successors, assigns and legal representatives may reasonably request in order to confirm, effectuate or record this Release.
- 3. <u>Execution in Counterparts</u>. This Release may be executed in any number of counterparts and by the different parties hereto on separate counterparts, each of which when so executed and delivered shall be an original, but all of which counterparts taken together shall be deemed to constitute one and the same instrument. Telecopied signatures hereto shall be of the same force and effect as an original of a manually signed copy.
- 4. Governing Law. THIS RELEASE AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE UNITED STATES AND THE STATE OF NEW YORK WITHOUT REFERENCE TO ANY CHOICE OR CONFLICT OF LAW DOCTRINE THAT WOULD RESULT IN THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION.

[Signature Page Follows]

IN WITNESS WHEREOF, the Lender has caused this Release to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

ORBIMED ROYALTY OPPORTUNITIES II, LP

as the Lender

By OrbiMed ROF II LLC, its General Partner

By OrbiMed Advisors LLC, its Managing Member

By: W. Coule Deul Name: W. Carter Neild Title: Member

REEL: 044164 FRAME: 0012

SCHEDULE 1

Issued Patents

Country	Patent No.	Issue Date	Inventors	Title
US	5,834,025	10-Nov-1998	Lawrence de	Reduction of intravenously
			Garavilla, Elaine	administered nanoparticulate-
			M. Liversidge,	formulation-induced adverse
			Gary G.	physiological reactions
			Liversidge	
US	RE41,884 E	26-Oct-2010	Lawrence de	Reduction of intravenously
			Garavilla, Elaine	administered nanoparticulate-
			M. Liversidge,	formulation-induced adverse
			Gary G.	physiological reactions
			Liversidge	
CA	2,232,879	02-Mar-2004	Lawrence de	Reduction Of Intravenously
			Garavilla, Elaine	Administered
			M. Liversidge,	Nanoparticulate-Formulation-
			Gary G.	Induced Adverse
			Liversidge	Physiological Reactions
US	7,459,283	02-Dec-2008	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
US	8,323,641	Dec 4, 2012	Christian F.	Nanoparticulate compositions
	-,,		Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
US	8,652,464	Feb 18, 2014	Christian F.	Method of treatment using
			Wertz, Niels P.	nanoparticulate compositions
			Ryde	having lysozyme as a surface
			,	stabilizer
Austria	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
		211.112.010	Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Belgium	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
201514111	11111007		Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Bulgaria	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
Duigana	LI 14/100/	21 / pi-2010	Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Canada	2,475,092	01-May-2012	Christian F.	Nanoparticulate compositions
Canaua	2,473,092	01-way-2012	Wertz, Niels P.	having lysozyme as a surface
			1	
			Ryde	stabilizer

Schedule 1

Country	Patent No.	Issue Date	Inventors	Title
Czech Republic	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
_			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Denmark	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
		1	Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
European Patent	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
Convention			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Finland	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
France	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
		r	Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Germany	60332212	21-Apr-2010	Christian F.	Nanoparticulate compositions
,			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Greece	3072191	11-Jun-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Hungary	E008527	28-Dec-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Ireland	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Italy	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Liechtenstein	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Netherlands	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Portugal	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Slovakia	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer

Country	Patent No.	Issue Date	Inventors	Title
Spain	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Sweden	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Switzerland	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
United	EP1471887	21-Apr-2010	Christian F.	Nanoparticulate compositions
Kingdom			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
Japan	4,598,399	01-Oct-2010	Christian F.	Nanoparticulate compositions
-			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
US	8,512,727	20-Aug-2013	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
CA	2,517,679	10-Apr-2012	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
JP	4,891,774	11-Dec-2011	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
JP	5,548,092	11-Dec-2011	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
HU	E005977	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	

Country	Patent No.	Issue Date	Inventors	Title
BE	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
FR	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
DE	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
IE	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
IT	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
LI	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
СН	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
GB	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	

Country	Patent No.	Issue Date	Inventors	Title
ES	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
EPC	EP1617816	13-May-2009	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
US	8,992,973	31-Mar-2015	Gurvinder Singh	Controlled Release
			Rekhi; Richard	Compositions Comprising A
			Sidwell; Sharon	Combination Of Isosorbide
			Hamm	Dinitrate And Hydralazine
				Hydrochloride
US	6,908,626	21-Jun-2005	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
CA	2,463,495	24-May-2011	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
DE	60222160.9	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
AT	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
BE	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
BU	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
CY	EP1443912	07-May-2010	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics

Country	Patent No.	Issue Date	Inventors	Title
CZ	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
DK	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
EE	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
EPO	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
FI	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
FR	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
GR	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
IE	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
IT	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
		_	Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
LU	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
		_	Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics

Country	Patent No.	Issue Date	Inventors	Title
MC	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
NL	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
PT	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
SK	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
ES	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
SE	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
СН	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
TR	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
GB	EP1443912	29-Aug-2007	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
US	6,228,398	08-May-2001	John G. Devane;	MULTIPARTICULATE
			Paul Stark; Niall	MODIFIED RELEASE
			M.M. Fanning	COMPOSITION

Country	Patent No.	Issue Date	Inventors	Title
US	6,902,742	07-Jun-2005	John G. Devane;	MULTIPARTICULATE
			Paul Stark; Niall	MODIFIED RELEASE
			M.M. Fanning;	COMPOSITION
			Gurvinder Singh	
			Rekhi	
US	6,730,325	04-May-2004	John G. Devane;	MULTIPARTICULATE
			Paul Stark; Niall	MODIFIED RELEASE
			M.M. Fanning;	COMPOSITION
			Gurvinder Singh	
			Rekhi	
US	6,793,936	21-SEP-2004	John G. Devane;	MULTIPARTICULATE
			Paul Stark; Niall	MODIFIED RELEASE
			M.M. Fanning	COMPOSITION
CA	2,348,871	14-Apr-2009	John G. Devane;	MULTIPARTICULATE
			Paul Stark; Niall	MODIFIED RELEASE
			M.M. Fanning	COMPOSITION
US	9,308,177	12-Apr-2016	Gurvinder Singh	Controlled release
			Rekhi; Richard	compositions comprising a
			Sidwell; Sharon	combination of isosorbide
			Hamm	dinitrate and hydralazine
				hydrochloride

Pending Patent Applications

Country	Application No.	Filing Date	Inventors	Title
EPO	10181619.7	29-Sep-2010	Lawrence de	Reduction of intravenously
			Garavilla, Elaine	administered nanoparticulate-
			M. Liversidge,	formulation-induced adverse
			Gary G.	physiological reactions
			Liversidge	
US	14/182,097	17 Feb 2014	Christian F.	Nanoparticulate compositions
			Wertz, Niels P.	having lysozyme as a surface
			Ryde	stabilizer
US	13/941,076	12-Jul-2013	Eugene R.	Nanoparticulate Meloxicam
			Cooper, Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	

Schedule 1

Country	Application No.	Filing Date	Inventors	Title
EPO	08006465.2	27-Feb-2004	Eugene R.	Nanoparticulate Meloxicam
			Cooper; Tuula	Formulations
			Ryde; John	
			Pruitt, Laura	
			Kline	
CA	2,627,951	26-Oct-2006	Gurvinder Singh	Controlled Release
			Rekhi; Richard	Compositions Comprising A
			Sidwell; Sharon	Combination Of Isosorbide
			Hamm	Dinitrate And Hydralazine
				Hydrochloride
EPO	06826637.8	26-Oct-2006	Gurvinder Singh	Controlled Release
			Rekhi; Richard	Compositions Comprising A
			Sidwell; Sharon	Combination Of Isosorbide
			Hamm	Dinitrate And Hydralazine
				Hydrochloride
JP	2013-126534	11-Oct-2002	Eugene R.	Compositions Having A
			Cooper; Stephen	Combination Of Immediate
			B. Ruddy	Release And Controlled
				Release Characteristics
US	11/372,857	10-Mar-2006	John G. Devane;	Multiparticulate Modified
			Paul Stark; Niall	Release Composition
			M. M. Fanning;	
			Gurvinder Singh	
			Rekhi; Scott A.	
			Jenkins; Gary	
			Liversidge	
US	10/827,689	19-Apr-2004	John G. Devane;	Multiparticulate Modified
			Paul Stark; Niall	Release Composition
			M. M. Fanning;	
			Gurvinder Singh	
			Rekhi; Scott A.	
			Jenkins;	

Patent Applications in Preparation

Country Docket No. Expected
Filing Date Inventor(s) Title
none

Patent Licenses

Territory	Licensor	Licensee	<u>Effective</u>	Expiration	Subject Matter
			<u>Date</u>	<u>Date</u>	
Worldwide	Alkermes	RECRO	TBD	TBD	Controlled
	Pharma	TECHNOLOGY			Release, Abuse
	Ireland	LLC			Deterrent and
	Limited				Nanocrystal
					technology

Schedule 1

SCHEDULE 2

Issued Patents

Country	Serial No.	Issue Date	Inventors	<u>Title</u>
US	9,452,163	27-Sep-2016		Abuse resistant
				pharmaceutical
				compositions
US	9,486,451	8-Nov-2016		Abuse resistant
				pharmaceutical
				compositions
US	9,713,611	25-Jul-2017		Abuse resistant
				pharmaceutical
				compositions
US	9,463,166	11-Oct-2016		Controlled release
				compositions
				comprising a
				combination of
				isosorbide dinitrate
				and hydralazine
				hydrochloride

Pending Patent Applications

Country	Serial No.	Filing Date	Inventors	<u>Title</u>
US	15/626,268	19-Jun-2017		Abuse resistant
				pharmaceutical
				compositions
US	15/193,514	27-Jun-2016		Multiparticulate
				Modified Release
				Composition
PCT	PCT/IB2015/056993	11-Sep-2015		Abuse resistant
				pharmaceutical
				compositions
EP	2015771283	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
JP	2017-534015	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC

Schedule 2

Country	Serial No.	Filing Date	Inventors	<u>Title</u>
				AL
				COMPOSITIONS
CA	2870380	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
AU	2015313785	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
BR	1120170048825	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
CN	201580054813	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
CR	2017-0142	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
IL	251011	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
MX	20173082	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
NZ	730882	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
RU	2017112301	11-Sep-2015		ABUSE

Country	Serial No.	Filing Date	<u>Inventors</u>	<u>Title</u>
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
SG	11201701845	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
ZA	2017/01721	11-Sep-2015		ABUSE
				RESISTANT
				PHARMACEUTIC
				AL
				COMPOSITIONS
US	15/257,653	6-Sep-2016		Controlled Release
				Compositions
				Comprising A
				Combination Of
				Isosorbide Dinitrate
				And Hydralazine
				Hydrochloride

RECORDED: 11/17/2017