

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Patent Security Agreement

CONVEYING PARTY DATA

Name	Execution Date
Quark Pharmaceuticals, Inc.	07/14/2011
Q.B.I. Enterprises Ltd.	07/14/2011

RECEIVING PARTY DATA

Name:	Nitto Denko Corporation
Street Address:	Herbis 2-5-25 Umeda, Kita-Ku
City:	Osaka
State/Country:	JAPAN
Postal Code:	530-0001

PROPERTY NUMBERS Total: 19

Property Type	Number
PCT Number:	US1005957
Application Number:	12963600
Application Number:	61388572
Application Number:	61388578
Patent Number:	6057111
Application Number:	11704600
Application Number:	12994725
Application Number:	13061934
Application Number:	12528907
Application Number:	12733998
Application Number:	12451140
Application Number:	13062161
PCT Number:	US1028200
PCT Number:	US1059597

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PCT Number:	US1058123
Application Number:	61419918
PCT Number:	US1049047
Application Number:	61419910
Application Number:	61497142

CORRESPONDENCE DATA

Fax Number: (917)777-4104
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
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Email: mmcguire@skadden.com
Correspondent Name: Skadden, Arps, Slate, Meagher & Flom LLP
Address Line 1: Four Times Square
Address Line 2: Attn: Elaine D. Ziff, Esq.
Address Line 4: New York, NEW YORK 10036

ATTORNEY DOCKET NUMBER: 092850/11

NAME OF SUBMITTER: elaine d ziff

Total Attachments: 15
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PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (the "Patent Security Agreement"), dated July 14, 2011, by QUARK PHARMACEUTICALS, INC., a California corporation having a principal place of business at 6501 Dumberton Circle, Fremont, CA 94555 ("Quark") and Q.B.I. Enterprises Ltd, an Israeli corporation having a principal place of business at Weizmann Science Park, P.O.B. 4571, Ness Zona, 70400, Israel, ("Quark Israel") and, together with Quark, collectively, the "Grantors" and, individually, each a "Grantor"), in favor of NITTO DENKO CORPORATION, a company organized under the laws of Japan having a principal place of business at Herbis Osaka 2-5-25 Umeda, Kita-Ku Japan (the "Secured Party").

WITNESSETH:

WHEREAS, Grantors and Secured Party have entered into a certain Clinical Trial Loan Agreement dated June 23, 2011 (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Loan Agreement");

WHEREAS, the Grantors are party to a Pledge and Security Agreement of even date herewith (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement") in favor of the Secured Party, pursuant to which the Grantors are required to execute and deliver this Patent Security Agreement; and

WHEREAS, the execution and delivery by Grantors of the Security Agreement and this Patent Security Agreement is a condition to making the Loan to Quark under the Loan Agreement.

NOW, THEREFORE, in consideration of the premises, and for other good and valuable consideration the sufficiency of which is hereby acknowledged, Grantors hereby agree as follows:

SECTION 1. Defined Terms. Capitalized terms not otherwise defined herein shall have the meanings assigned to such terms in the Security Agreement.

SECTION 2. Grant of Security Interest in Patent Collateral. As security for the prompt and complete payment and performance in full of all the Secured Obligations when due, each Grantor hereby grants to the Secured Party a first priority continuing lien on and security interest in its respective right, title and interest in, to, and under the following types of property, whether now owned or existing or hereafter acquired or arising, and wherever located (all of which being hereinafter collectively referred to the "Patent Collateral"):

(a) all Intellectual Property identified on Schedule 1 attached (as such Schedule shall be updated from time to time) which Schedule, for clarity, includes all Jointly Owned IP.

(b) all other siRNA IP, including, without limitation, all Intellectual Property identified on Table II of Schedule 2 hereto, as such Schedule shall be updated from time to time, except for such siRNA IP as to which a security interest may not be granted by Grantors without violating the contract rights or other rights of a third party after giving effect to Sections 9-406 through 9-409 of the UCC (the "Excluded IP") (the Intellectual Property granted pursuant to subsection (a) and (b) of this Section 2 are, together, the "Secured siRNA IP"); and

(c) to the extent not covered by clause (a) or (b) of this sentence, all Proceeds, products, accessions, additions, substitutions, replacements, rents, and profits of or in respect to any or all of the foregoing.

SECTION 3. Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted concurrently and in conjunction with the security interest granted to the Secured Party pursuant to the Security Agreement and Grantors hereby acknowledge and affirm that the rights and remedies of the Secured Party with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control.

SECTION 4. Termination. This Patent Security Agreement shall terminate at such time as the Security Agreement terminates and, thereafter, upon Grantors' request and at the Grantors' sole cost, the Secured Party shall execute and deliver to the Grantors an instrument releasing the lien and security interest in the Patent Collateral granted under this Patent Security Agreement.

SECTION 5. Counterparts. This Patent Security Agreement 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 shall together constitute one and the same instrument.


SECTION 6. CHOICE OF LAW. THIS PATENT SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

[Signature Page Follows]

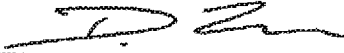
IN WITNESS WHEREOF, each Grantor has caused this PATENT SECURITY AGREEMENT to be duly executed and delivered by its duly authorized officer as of the date first above written.

Very truly yours,

QUARK PHARMACEUTICALS, INC.

By: 
Name: DANIEL ZURR
Title: CEO

Q.B.I. ENTERPRISES LTD

By: 
Name: DANIEL ZURR
Title: CEO

Accepted and Agreed:

NITTO DENKO CORPORATION,
as the Secured Party

By: _____
Name: Kageshi Maruyama
Title: Corporate Vice President

SIGNATURE PAGE TO PATENT SECURITY AGREEMENT

IN WITNESS WHEREOF, each Grantor has caused this PATENT SECURITY AGREEMENT to be duly executed and delivered by its duly authorized officer as of the date first above written.

Very truly yours,

QUARK PHARMACEUTICALS, INC.

By: _____
Name:
Title:

Q.B.I. ENTERPRISES LTD

By: _____
Name:
Title:

Accepted and Agreed:

NITTO DENKO CORPORATION,
as the Secured Party

By: 
Name: Kageshi Maruyama
Title: Corporate Vice President

SIGNATURE PAGE TO PATENT SECURITY AGREEMENT

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**SCHEDULE 1
TO
PATENT SECURITY AGREEMENT**

SCHEDULE 1 to Patent Security Agreement

1. "Jointly Owned IP" - Nitto Denko & Quark

Docket ID	Owner	App No.	App Date	Country	Status	Grant No.
220/PCT1	Quark Nitto Denko	PCT/US2010/05957	8-Dec-2010	PCT	Pending	
220/TW1	Quark Nitto Denko	Foley is to report	8-Dec-2010	Taiwan		
220/US1	Quark Nitto Denko	12/963,600	8-Dec-2010	USA	Pending	
224/USP1	Quark Nitto Denko	81/388572	30-Sep-2010	USA	Pending	
226/USP1	Quark Nitto Denko	81/386678	30-Sep-2010	USA	Pending	

2. siRNA IP owned by Quark or Quark Israel

Docket ID	Owner	App No.	App Date	Country	Status	Grant No.
002/PCT1-IL1	QBI	129872	12-Nov-1997	Israel	Granted	129872
003/PCT1-IL1	Quark	129507	12-Nov-1997	Israel	Granted	129507
003/PCT1-US1	Quark	09/284782	12-Nov-1997	USA	Granted	6057111
162/PCT1-EP1	Quark	7708127.3	8-Feb-2007	EPO	Pending	
162/PCT1-IL1	Quark	193313	8-Feb-2007	Israel	Pending	
162/US1	Quark	11/704600	8-Feb-2007	USA	Pending	
178/PCT1-EP1	Quark	8758028.8	7-Jun-2008	EPO	Pending	
178/PCT1-IL1	Quark	208658	7-Jun-2008	Israel	Pending	
178/PCT1-JP1	Quark	2011-512270	7-Jun-2008	japan	Pending	
178/PCT1-US1	Quark	12/994,725	7-Jun-2008	USA	Pending	
177/PCT2-US1	Quark	13/061,934	23-Oct-2008	PCT	Pending	
178/PCT1-US1	Quark	12/528907	28-Feb-2006	USA	Pending	
178/PCT2-AU1	Quark	2008308453	4-Sep-2008	Australia	Pending	
178/PCT2-BR1	Quark	not yet available	4-Sep-2008	Brazil	Pending	
178/PCT2-CA1	Quark	2701645	4-Sep-2008	Canada	Pending	
178/PCT2-CN1	Quark	20080110087.0	4-Sep-2008	China	Pending	
178/PCT2-EP1	Quark	8806012.2	4-Sep-2008	EPO	Pending	
178/PCT2-IL1	Quark	204580	4-Sep-2008	Israel	Pending	
178/PCT2-IN1	Quark	1377/KOLNP/2010	4-Sep-2008	India	Pending	
178/PCT2-JP1	Quark	2010-627594	4-Sep-2008	Japan	Pending	
178/PCT2-KR1	Quark	10-2010-7009512	4-Sep-2008	Korea	Pending	
				(South)		
178/PCT2-RU1	Quark	2010113514	4-Sep-2008	Russian Federation	Pending	
178/PCT2-US1	Quark	12/733998	4-Sep-2008	USA	Pending	
180/PCT1-EP1	Quark	EP08738224.8	27-Apr-08	EPO	Pending	
180/PCT1-US1	Quark	12/451140	27-Apr-08	USA	Pending	

Docket ID	Owner	App No.	App Date	Country	Status	Grant No.
188/PCT2-AU1	Quark	2009308380	22-Oct-2009	Australia	Pending	
188/PCT2-BR1	Quark	not yet known	22-Oct-2009	Brazil	Pending	
188/PCT2-CA1	Quark	not yet known	22-Oct-2009	Canada	Pending	
188/PCT2-CN1	Quark	not yet known	22-Oct-2009	China	Pending	
188/PCT2-EA1	Quark	201170551	22-Oct-2009	Eurasia	Pending	
188/PCT2-EP1	Quark	9748890.2	22-Oct-2009	Europe	Pending	
188/PCT2-IL1	Quark	not yet known	22-Oct-2009	Israel	Pending	
188/PCT2-IN1	Quark	1882/KOLNP/2011	22-Oct-2009	India	Pending	
188/PCT2-JP1	Quark	not yet known	22-Oct-2009	Japan	Pending	
188/PCT2-KR1	Quark	not yet known	22-Oct-2009	Korea	Pending	
188/PCT2-NZ1	Quark	591391	22-Oct-2009	New Zealand	Pending	
188/PCT2-SG1	Quark	not yet known	22-Oct-2009	Singapore	Pending	
188/PCT2-US1	Quark	13/082,181	22-Oct-2009	USA	Pending	
202/PCT1	Quark	PCT/US10/28200	23-Mar-2010	PCT	Pending	
206/PCT1	Quark	PCT/US2010/69597	9-Dec-2010	PCT	Pending	
213/PCT1	Quark	PCT/US2010/0581	25-Nov-2010	PCT	Pending	
		23				
213/TW1	Quark	99141067	25-Nov-2010	Taiwan	Pending	
215/USP1	Quark	81/419918	6-Dec-2010	USA	Pending	
217/PCT1	Quark	PCT/US2010/0490	16-Sep-2010	PCT	Pending	
		47				
231/USP1	Quark	81/419910	6-Dec-2010	USA	Pending	
234/USP1	Quark	81/497142	15-Jun-2011	USA	Pending	

**SCHEDULE 2
TO
PATENT SECURITY AGREEMENT**

Other siRNA IP

Schedule 2 to Patent Security Agreement

SCHEDULE 2 to PATENT SECURITY AGREEMENT

Intellectual Property licensed to third parties or licensed from third parties or jointly owned with third parties. The list is divided into IP licensed to Pfizer
 IP option-licensed to Novartis
 IP licensed in by Quark or Quark Israel
 IP jointly owned by Quark or Quark Israel with third parties;

Docket ID	Title	Owner	App No.	App Date	Country	Status	Grant No.
005/PCT1-EP1/A1	Intellectual Property licensed to Pfizer						
005/PCT1-EP1/A1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Austria	Granted	E 2938333
005/PCT1-EP1/BE1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Belgium	Granted	1009753
005/PCT1-EP1/CH1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Switzerland	Granted	1009753
005/PCT1-EP1/DE1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Germany	Granted	898 28 857 8-
005/PCT1-EP1/FR1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	France	Granted	1009753
005/PCT1-EP1/GB1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	UK	Granted	1008753
005/PCT1-EP1/IT1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Italy	Granted	1009753
005/PCT1-EP1/LU1	Hypoxia regulated genes (801)	Quark	88943278.8	21-Aug-1998	Luxembourg	Granted	1009753
005/PCT1-IL1	Hypoxia regulated genes (801)	Quark	134208	21-Aug-1998	Israel	Granted	194286
005/PCT1-J1	Hypoxia regulated genes (801)	Quark	185791	15-Jan-2002	USA	Pending	
005/PCT1-JP1	Hypoxia regulated genes (801)	Quark	5097262800	21-Aug-1998	Japan	Granted	4354633
005/PCT1-EP1/A	Hypoxia regulated genes (801)	Quark	2009-143875	15-Jun-2000	Japan	Pending	
005/US01-1B	Hypoxia regulated genes (801)	Quark	09604976	28-Jun-2000	USA	Granted	6455674
005/US01-1C	Hypoxia regulated genes (801)	Quark	09650478	23-Jun-2000	USA	Granted	6555687
005/US12	An Antibody to Hypoxia Protein	Quark	10325676	23-Dec-2002	USA	Granted	8740738
005/US14	Hypoxia regulated genes	Quark	12157821	13-Jun-2003	USA	Allowed	
005/US15	The specific uses of inhibitors of RIP60	Quark Ther	AP07007003831	18-Aug-2005	USPPO	Pending	
141/PCT1-AU1	Therapeutic uses of inhibitors of RIP60	Quark	2005277508	18-Aug-2005	Australia	Pending	
141/PCT1-BR1	Therapeutic uses of inhibitors of RIP60	Silence Ther	P08143950	18-Aug-2005	Brazil	Pending	
141/PCT1-CA1	Therapeutic uses of inhibitors of RIP60	Silence Ther	2577423	16-Aug-2005	Canada	Pending	
141/PCT1-CN1	Therapeutic uses of inhibitors of RIP60	Silence Ther	200580034958.5	16-Aug-2005	China	Pending	
141/PCT1-CO1	Therapeutic uses of inhibitors of RIP60	Silence Ther	07-015-824	16-Aug-2005	Colombia	Pending	
141/PCT1-CR1	Therapeutic uses of inhibitors of RIP60	Silence Ther	8885	15-Jul-2007	Costa Rica	Pending	
141/PCT1-CU1	Therapeutic uses of inhibitors of RIP60	Silence Ther	not available	16-Aug-2005	Cuba	Pending	
141/PCT1-EA1	Therapeutic uses of inhibitors of RIP60	Quark	200700333	16-Aug-2005	EAPO	Granted	12789
141/PCT1-EG1	Therapeutic uses of inhibitors of RIP60	Silence Ther	3803007	16-Aug-2005	(Eurasian)	Pending	
141/PCT1-EP1	Therapeutic uses of inhibitors of RIP60	Quark	5786786.2	16-Aug-2005	EP	Pending	
141/PCT1-GE1	Therapeutic uses of inhibitors of RIP60	Silence Ther	AP 2005 008669	16-Aug-2005	Georgia	Pending	
141/PCT1-HK1	Therapeutic uses of inhibitors of RIP60	Quark	8105809.2	16-Aug-2005	Hong Kong	Pending	

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141/PCT1-ID1	Therapeutic uses of inhibitors of RTP801	Quark	WI/00 2007 0352	16-Aug-2005	Indonesia	Pending
141/PCT1-IL1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-IL1A	Therapeutic uses of inhibitors of RTP801	Quark	161236	16-Aug-2005	Israel	Pending
141/PCT1-IN1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-IN1A	Therapeutic uses of inhibitors of RTP801	Quark	212985	2-Jun-2011	Israel	Pending
141/PCT1-IP1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-IP1A	Therapeutic uses of inhibitors of RTP801	Quark	1967/DELNP/2007	16-Aug-2005	India	Pending
141/PCT1-IR1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-IR1A	Therapeutic uses of inhibitors of RTP801	Quark	2097-527969	16-Aug-2005	Japan	Granted
141/PCT1-KR1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-KR1A	Therapeutic uses of inhibitors of RTP801	Quark	2007-7026061	16-Aug-2005	Korea	Granted
141/PCT1-KR1A	Inhibition of RTP801 for treatment of respiratory disorders	Silence Ther.				
141/PCT1-KR1A	Inhibition of RTP801 for treatment of respiratory disorders	Quark	2008-7022383	26-Oct-2008	Korea (South)	Pending
141/PCT1-MA1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-MA1	Therapeutic uses of inhibitors of RTP801	Quark	28893	16-Aug-2005	Morocco	Granted
141/PCT1-MN1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-MN1	Therapeutic uses of inhibitors of RTP801	Quark	3933	16-Aug-2005	Mongolia	Granted
141/PCT1-MX1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-MX1	Therapeutic uses of inhibitors of RTP801	Quark	MX/Ja/2007/02043	16-Aug-2005	Mexico	Pending
141/PCT1-NO1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-NO1	Therapeutic uses of inhibitors of RTP801	Quark	20071240	16-Aug-2005	Norway	Pending
141/PCT1-NZ1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-NZ1	Therapeutic uses of inhibitors of RTP801	Quark	553162	16-Aug-2005	New Zealand	Granted
141/PCT1-OA1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-OA1	Therapeutic uses of inhibitors of RTP801	Quark	1207/00371	16-Aug-2005	Admission Open Granted (AIPO)	13685
141/PCT1-SG1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-SG1	Therapeutic uses of inhibitors of RTP801	Quark	200701053-7	21-Mar-2011	Singapore	Pending
141/PCT1-SG1A	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-SG1A	Therapeutic uses of inhibitors of RTP801	Quark	not yet available	16-Aug-2005	Singapore	Pending
141/PCT1-UA1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-UA1	Therapeutic uses of inhibitors of RTP801	Quark	200701610	16-Aug-2005	Ukraine	Granted
141/PCT1-UZ1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-UZ1	Therapeutic uses of inhibitors of RTP801	Quark	IAP 2007 0080	16-Aug-2005	Uzbekistan	Granted
141/PCT1-ZA1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/PCT1-ZA1	Therapeutic uses of inhibitors of RTP801	Quark	200701364	6-Aug-2005	South Africa	Granted
141/US1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/US1	Therapeutic uses of inhibitors of RTP801	Quark	11207119	16-Aug-2005	USA	Granted
141/AUS1A	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/AUS1A	Therapeutic uses of inhibitors of RTP801	Quark	11/027199	7-Jun-2010	USA	Pending
141/AUS2	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
141/AUS2	Therapeutic uses of inhibitors of RTP801	Quark	12068578	17-Jun-2010	USA	Pending
157/AR1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
157/AR1	Therapeutic uses of inhibitors of RTP801	Quark	P 07 01 00243	19-Jan-2007	Argentina	Pending
157/CL1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
157/CL1	Therapeutic uses of inhibitors of RTP801	Quark	141-07	19-Jan-2007	Chile	Pending
167/PCT1-AU1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
167/PCT1-AU1	Therapeutic uses of inhibitors of RTP801	Quark	2007207479	16-Jan-2007	Australia	Pending
167/PCT1-BR1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
167/PCT1-BR1	Therapeutic uses of inhibitors of RTP801	Quark	PC/TUS2007/01488	19-Jan-2007	Brazil	Pending
167/PCT1-CA1	Therapeutic uses of inhibitors of RTP801	Silence Ther.				
167/PCT1-CA1	Therapeutic uses of inhibitors of RTP801	Quark	2635723	19-Jan-2007	Canada	Pending

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167/PCT1-CN1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	200760602706.9	18-Jan-2007	China	Pending
167/PCT1-EP1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	7718224.4	18-Jan-2007	EPC	Pending
167/PCT1-IL1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	192890	18-Jan-2007	Israel	Pending
167/PCT1-IL1A	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	211835	21-Mar-2011	Israel	Pending
167/PCT1-IN1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	70850ELNP/2008	18-Jan-2007	India	Pending
167/PCT1-JP1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	2008-551422	18-Jan-2007	Japan	Pending
167/PCT1-KR1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	2008-7017705	18-Jan-2007	Korea (South)	Pending
167/PCT1-MX1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	MX/a/2008/009358	18-Jan-2007	Mexico	Pending
167/PCT1-NZ1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	589552	18-Jan-2007	New Zealand Ausbaboores**	
167/PCT1-RU1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	2008128601	18-Jan-2007	Russian Ausbaboores**	
167/PCT1-SG1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	421127	18-Jan-2007	Singapore	Pending
167/PCT1-ZA1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	2008/08150	18-Jan-2007	South Africa	Granted
187/TW1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	86102138	19-Jan-2007	Taiwan	Pending
167/US1	Therapeutic uses of inhibitors of RTP801	Quark Silence Ther	11855838	18-Jan-2007	USA	Allowed
178/PCT1-EP1	Inhibitors of RTP801 and their use in disease treatment	Quark Silence Ther	6726066.7	28-Feb-2006	EPC	Pending
178/PCT1-IL1	Inhibitors of RTP801 and their use in disease treatment	Quark	200578	28-Feb-2008	Israel	Pending
178/PCT1-JP1	Inhibitors of RTP801 and their use in disease treatment	Quark	2009-551985	28-Feb-2008	Japan	Pending
178/US1	Inhibitors of RTP801 and their use in disease treatment	Quark	12/072,392	26-Feb-2008	USA	Granted
178/US1A	Inhibitors of RTP801 and their use in disease treatment	Quark	12/007,695	26-Feb-2008	USA	Pending
192/PCT1-AU1	Novel siRNA compounds for inhibiting RTP801	Quark	2006227549	17-Mar-2009	Australia	Pending
192/PCT1-BR1	Novel siRNA compounds for inhibiting RTP801	Quark		17-Mar-2009	Brazil	Pending
192/PCT1-CA1	Novel siRNA compounds for inhibiting RTP801	Quark	2,718,785	17-Mar-2009	Canada	Pending
192/PCT1-CN1	Novel siRNA compounds for inhibiting RTP801	Quark		17-Mar-2009	China	Pending
192/PCT1-EP1	Novel siRNA compounds for inhibiting RTP801	Quark	872841.5	17-Mar-2009	Europe	Pending
192/PCT1-IL1	Novel siRNA compounds for inhibiting RTP801	Quark	207916	17-Mar-2009	Israel	Pending
192/PCT1-IN1	Novel siRNA compounds for inhibiting RTP801	Quark		17-Mar-2009	India	Pending
192/PCT1-JP1	Novel siRNA compounds for inhibiting RTP801	Quark		17-Mar-2009	Japan	Pending

Schedule 2 to Patent Security Agreement

192/PCT1-KR1	Novel siRNA compounds for inhibiting R1P201	Quark	2010-7023465	17-Mar-2009	Korea (South)	Pending	
192/PCT1-MX1	Novel siRNA compounds for inhibiting R1P201	Quark	MX/a/2010/010303	17-Mar-2009	Mexico	Pending	
192/PCT1-RU1	Novel siRNA compounds for inhibiting R1P201	Quark		17-Mar-2009	Russian Federation	Pending	
192/PCT1-US1	Novel siRNA compounds for inhibiting R1P201	Quark	12738, 230	17-Mar-2009	USA	Pending	
<p>Further patent claims were licensed from the owners for use only for the development of siRNA directed to p53 (CPI-1003) [in separate agreements] and sub-licensed to Pfizer and option-licensing to Novartis</p>							
018/PCT1-EP1/BE1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	Belgium	Granted	1143843
018/PCT1-EP1/CH1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	Switzerland	Granted	1143843
018/PCT1-EP1/DE1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	Germany	Granted	80037384, 0-08
018/PCT1-EP1/FR1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	France	Granted	1143843
018/PCT1-EP1/GB1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	UK	Granted	1143843
018/PCT1-EP1/IE1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	914455.1	28-Jan-2000	Ireland	Granted	1143843
018/PCT1-EP2	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	7006684.9	28-Jan-2000	EPO	Pending	
018/PCT1-IL1	Use of P53 inhibitors for Preparation of Medicament	UIC (exclusively licensed to Quark)	144294	28-Jan-2000	Israel	Granted	144294
018/PCT1-IL2	Use of P53 inhibitors for Preparation of Medicament	UIC (exclusively licensed to Quark)	195723	28-Jan-2000	Israel	Pending	
018/PCT1-JP1A	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	2010-185868	28-Jan-2000	Japan	Pending	
018/PCT1-ZA1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	2001/5623	28-Jan-2000	South Africa	Granted	2001/5623

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018/US1	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	09/493527	26-Jan-2000	USA	Granted	6593353
018/US2	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	09/690417	13-Jun-2001	USA	Granted	7012087
018/US4	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	10/360560	24-Jan-2003	USA	Granted	6982277
018/US5	p53 inhibitors and therapeutic use of the same	UIC (exclusively licensed to Quark)	10/352597	28-Jan-2003	USA	Granted	7006956
144/PCT1-BR1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	P10518177-0	27-Sep-2005	Brazil	Pending	
144/PCT1-CA1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	2588126	27-Sep-2005	Canada	Pending	
144/PCT1-CN1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	200560032715.4	27-Sep-2005	China	Pending	
144/PCT1-EP1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	5768492.6	27-Sep-2005	EPO	Pending	
144/PCT1-IL1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	181958	27-Sep-2005	Israel	Pending	
144/PCT1-IL1A	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	209956	1-Dec-2010	Israel	Pending	
144/PCT1-IN1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	985/KOLNP/2607	27-Sep-2005	India	Pending	
144/PCT1-JP1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	2007-534174	27-Sep-2005	Japan	Pending	
144/PCT1-KR1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	10-2007-7009173	27-Sep-2005	Korea (South)	Pending	
144/PCT1-MX1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	MX/A/2007/603785	27-Sep-2005	Mexico	Pending	
144/PCT1-NZ1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	553687	27-Sep-2005	New Zealand	Pending	
144/PCT1-RU1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	2007116166	27-Sep-2005	Russian Federation	Pending	
144/PCT1-SG1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	200702035-7	27-Sep-2005	Singapore	Granted	131183
144/PCT1-SG1A	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	730273	27-Sep-2010	Singapore	Pending	

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144/PC11-ZA1	Oligonucleotides And Methods Of Use Thereof For Treatment Of Alopecia, Acute Renal Failure and Other Diseases	Quark	ZA 2007/02536	27-Sep-2005	South Africa	Granted	2007/02536
144/US1	Oligonucleotides and methods of use thereof for treatment of alopecia, acute renal failure and other diseases	Quark	11/237596	27-Sep-2005	USA	Pending	
144/US1A	Methods of treatment of acute renal failure	Quark	11/627199	10-Jul-2007	USA	Granted	7842674
144/US2	Oligonucleotides and methods of use thereof for treatment of alopecia, acute renal failure and other diseases	Quark	12/008578	11-Jan-2008	USA	Pending	
166/US1	Treatment or prevention of oto-pathologies by inhibition of pro-apoptotic genes	Quark	11/656610	18-Jan-2007	USA	Granted	7825099
168/US2	Prevention and treatment of acute renal failure and other kidney diseases by inhibition of p53 by siRNA	Quark	12/066722	4-Jan-2008	USA	Granted	7910566
166/US3	TREATMENT OR PREVENTION OF OTO-PATHOLOGIES BY INHIBITION OF PRO-APOPTOTIC GENES	Quark	12/459617	1-Jul-2008	USA	Pending	
184/PC11-EP1	Compositions and methods for inhibiting expression of pro-apoptotic genes	Quark	6753631.2	26-Jun-2008	EPO	Pending	
184/PC11-US1	Compositions and methods for inhibiting expression of pro-apoptotic genes	Quark	12/452321	26-Jun-2008	USA	Pending	
223/PC11-EP1A	siRNA targeting tumor protein 53	Dharmacon exclusively licensed to Quark	EP10042132.8	30-Sep-2010	EPO	Pending	
223/US3	siRNA targeting tumor protein 53	Dharmacon exclusively licensed to Quark	12/586271	18-Sep-2009	USA	Granted	7,781,575
<p>Further information: these inventions were licensed from the owners for use only for the development of siRNA directed to RTP801 (PF-6801) and p53 (OP-1802) [on separate agreements] Pfizer and option.</p>							
<p>Patents licensed from third parties</p>							
033/US6	Ataxia telangiectasia gene	Ramot (Tel Aviv Univ)	06/952127	26-Feb-1998	USA	Granted	8211336
195/EP1/PC11-EP3/AT1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	06004076.9	8-Jun-2005	Austria	Granted	EP1923702
195/EP1/PC11-EP3/BE1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	06004076.9	8-Jun-2005	Belgium	Granted	EP1923702
195/EP1/PC11-EP3/CH1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	06004076.9	8-Jun-2005	Switzerland	Granted	EP1923702
195/EP1/PC11-EP3/DE1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	06004076.9	8-Jun-2005	Germany	Granted	EP1923702
195/EP1/PC11-EP3/DK1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	06004076.9	8-Jun-2005	Denmark	Granted	EP1923702

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195/EP1/PCT1-EP3/ESI	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Spain	Granted	EP1923702
195/EP1/PCT1-EP3/FR1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	France	Granted	EP1923702
195/EP1/PCT1-EP3/GB1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	UK	Granted	EP1923702
195/EP1/PCT1-EP3/IE1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Ireland	Granted	EP1923702
195/EP1/PCT1-EP3/IT1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Italy	Granted	EP1923702
195/EP1/PCT1-EP3/LU1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Luxembourg	Granted	EP1923702
195/EP1/PCT1-EP3/NL1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Netherlands	Granted	EP1923702
195/EP1/PCT1-EP3/SE1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	08004076.9	6-Jun-2005	Sweden	Granted	EP1923702
195/EP1/PCT1-US1	Novel means and methods for the treatment of hearing loss and phantom hearing	Univ Geneva	11/628419	4-Dec-2006	USA	Pending	
004/PCT1-IL1	IRES sequences with high translational efficiency and expression vectors containing the IRES sequence	Quark Yissum (Hebrew Univ)	131275	25-Feb-1998	Israel	Granted	131275
004/PCT1-US1	IRES sequences with high translational efficiency and expression vectors containing the IRES sequence	Quark Yissum (Hebrew Univ)	09/367419	25-Feb-1998	USA	Granted	5553132
024/US1	Genes involved in stroke response and/or regulated by FK506, proteins encoded thereby, and methods of use	Quark Astellas	10/021338	12-Dec-2001	USA	Granted	6833237
029/PCT1-EP1	Inhibitors of spermatid synthesis for the treatment of colorectal and cartilage (chondroblast)	Quark Shering	18943263	12-Dec-2001	EP	Granted	EP1357867
038/PCT1-IL1	Use of Stem-Cells Synthesis Inhibition for the Preparation of a Medicament for the Treatment of Chondrocytes and Cartilage Rehabilitation	Quark Shering	158405	12-Dec-2001	Israel	Pending	
028/US1	Inhibitors of spermatid synthesis for the treatment of osteoarthritis and cartilage (chondroblast)	Quark Shering	10/020038	12-Dec-2001	USA	Granted	6836656
055/US1	Methods of preventing or treating brain ischemia or brain injury	Quark Astellas	10/371725	20-Feb-2003	USA	Granted	7202211
209/PCT1	Methods for Treating Chronic Kidney Disease	Quark Veterans Administration USA	PCT/US2010/037565	7-Jun-2010	PCT	Pending	
216/PCT1	METHODS FOR DELIVERY OF SIRNA TO THE SPINAL CORD AND THERAPIES ARISING THEREFROM	Quark Rutgers Univ	PCT/US2010/055755	6-Nov-2010	PCT	Pending	
228/USP1	COMBINATION THERAPY FOR TREATING LUNG DISEASE AND INJURY	Quark Univ Washington	61/448723	3-Mar-2011	USA	Pending	