

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5880126

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	PATENT SECURITY AGREEMENT
CONVEYING PARTY DATA	
Name	Execution Date
GRADALIS, INC.	12/19/2019
RECEIVING PARTY DATA	
Name:	HC INNOVATIVE PARTNERS, LP, AS COLLATERAL AGENT
Street Address:	155 N. WACKER DRIVE, SUITE 4400
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60606
PROPERTY NUMBERS Total: 24	
Property Type	Number
Patent Number:	8916530
Patent Number:	9382589
Patent Number:	9528991
Patent Number:	9914977
Patent Number:	9157084
Patent Number:	9695422
Patent Number:	9132146
Patent Number:	9790518
Patent Number:	10253331
Patent Number:	8333988
Patent Number:	9181225
Patent Number:	8361983
Patent Number:	8808983
Patent Number:	9290763
Patent Number:	9556431
Application Number:	15420791
Patent Number:	8735058
Patent Number:	8252526
Patent Number:	8758998
Patent Number:	8906874

PATENT

Property Type	Number
Patent Number:	8460908
Patent Number:	8647857
Patent Number:	9353373
Patent Number:	9683237

CORRESPONDENCE DATA

Fax Number:

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: 2123186532
Email: alanagramer@paulhastings.com
Correspondent Name: ALANA GRAMER
Address Line 1: C/O PAUL HASTINGS LLP
Address Line 2: 200 PARK AVENUE
Address Line 4: NEW YORK, NEW YORK 10166

NAME OF SUBMITTER: ALANA GRAMER

SIGNATURE: /s/ AG

DATE SIGNED: 12/20/2019

Total Attachments: 10

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PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this “Patent Security Agreement”) is made this December 19th, 2019, by and between Gradalis, Inc., a Delaware corporation (the “Grantor”) whose address is 8333 Douglas Avenue, Suite 1600, Dallas, TX 75225, and HC Innovative Partners, LP, a Delaware limited partnership, as Collateral Agent for the Purchasers (as such terms are defined in the Note Purchase Agreement defined below) from time to time party to the Note Purchase Agreement (in such capacity, together with its successors and assigns in such capacity, “Agent”) whose address is 155 N. Wacker Drive, Suite 4400, Chicago, IL 60606.

WITNESSETH:

WHEREAS, pursuant to that certain Note Purchase Agreement of even date herewith (such Note Purchase Agreement, as the same may be amended, restated, supplemented or otherwise modified from time to time, being hereinafter referred to as the “Note Purchase Agreement”) by and among the Grantor, the Purchasers from time to time party thereto and the Agent, such Purchasers have agreed to make certain financial accommodations available to Grantor from time to time pursuant to the terms and conditions thereof;

WHEREAS, the Purchasers are willing to make the financial accommodations to Grantor as provided for in the Note Purchase Agreement and the other Note Documents, but only upon the condition, among others, that the Grantor shall have executed and delivered to Agent, for the benefit of the Purchasers, that certain Security Agreement, dated as of even date herewith (including all annexes, exhibits or schedules thereto, as from time to time amended, restated, supplemented or otherwise modified, the “Security Agreement”); and

WHEREAS, pursuant to the Security Agreement, Grantor is required to execute and deliver to Agent, for the benefit of the Purchasers, this Patent Security Agreement.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby agrees as follows:

1. **DEFINED TERMS.** All initially capitalized terms used but not otherwise defined herein have the meanings given to them in the Security Agreement or, if not defined therein, in the Note Purchase Agreement, and this Patent Security Agreement shall be subject to the rules of construction set forth in Article 1 of the Security Agreement, which rules of construction are incorporated herein by this reference, mutatis mutandis.

2. **GRANT OF SECURITY INTEREST IN PATENT COLLATERAL.** Grantor hereby unconditionally grants, assigns, and pledges to Agent, for the benefit of the Purchasers, to secure the Obligations, a continuing security interest (referred to in this Patent Security Agreement as the “Security Interest”) in all of Grantor’s right, title and interest in and to the following, whether now owned or hereafter acquired or arising (collectively, the “Patent Collateral”):

(a) all of its Patents and Patent Intellectual Property Licenses to which it is a party including those referred to on Schedule I;

(b) all divisionals, continuations, continuations-in-part, reissues, reexaminations, or extensions of the foregoing; and

(c) all products and proceeds of the foregoing, including any claim by Grantor against third parties for past, present or future infringement of any Patent or any Patent exclusively licensed under any Intellectual Property License, including the right to receive damages, or right to receive license fees, royalties, and other compensation under any Patent Intellectual Property License.

3. SECURITY FOR OBLIGATIONS. This Patent Security Agreement and the Security Interest created hereby secures the payment and performance of the Obligations, whether now existing or arising hereafter. Without limiting the generality of the foregoing, this Patent Security Agreement secures the payment of all amounts which constitute part of the Obligations and would be owed by Grantor to Agent, the Purchasers or any of them, whether or not they are unenforceable or not allowable due to the existence of any proceeding commenced by or against Grantor under any provision of title 11 of the United States Code, as in effect from time to time, or under any other state or federal bankruptcy or insolvency law, assignments for the benefit of creditors, formal or informal moratoria, compositions, extensions generally with creditors, or proceedings seeking reorganization, arrangement, or other similar relief, in each case involving Grantor.

4. SECURITY AGREEMENT. The Security Interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interests granted to Agent, for the benefit of the Purchasers, pursuant to the Security Agreement. Grantor hereby acknowledges and affirms that the rights and remedies of Agent 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. To the extent there is any inconsistency between this Patent Security Agreement and the Security Agreement, the Security Agreement shall control.

5. AUTHORIZATION TO SUPPLEMENT. If Grantor shall obtain rights to any new patent application or issued patent or become entitled to the benefit of any patent application or patent for any divisional, continuation, continuation-in-part, reissue, or reexamination of any existing patent or patent application, the provisions of this Patent Security Agreement shall automatically apply thereto. Grantor shall give prompt notice in writing to Agent with respect to any such new patent rights. Without limiting Grantor's obligations under this Section, Grantor hereby authorizes Agent unilaterally to modify this Patent Security Agreement by amending Schedule I to include any such new patent rights of Grantor. Notwithstanding the foregoing, no failure to so modify this Patent Security Agreement or amend Schedule I shall in any way affect, invalidate or detract from Agent's continuing security interest in all Collateral, whether or not listed on Schedule I.

6. COUNTERPARTS. This Patent Security Agreement is a Note Document. This Patent Security Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Patent Security Agreement. Delivery of an executed counterpart of this Patent Security Agreement by telefacsimile or other electronic method of transmission shall be equally as effective as delivery of an original executed counterpart of this Patent Security Agreement. Any party delivering an executed counterpart of this Patent Security Agreement by telefacsimile or other electronic method of transmission also shall deliver an original executed counterpart of this Patent Security Agreement but the failure to deliver an original executed counterpart shall not affect the validity, enforceability, and binding effect of this Patent Security Agreement.

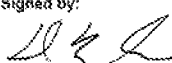
7. CHOICE OF LAW AND VENUE, JURY TRIAL WAIVER, AND JUDICIAL REFERENCE PROVISION. THIS PATENT SECURITY AGREEMENT SHALL BE SUBJECT TO THE PROVISIONS REGARDING CHOICE OF LAW AND VENUE, JURY TRIAL WAIVER, AND JUDICIAL REFERENCE SET FORTH IN SECTION 7.6 OF THE SECURITY AGREEMENT, AND SUCH PROVISIONS ARE INCORPORATED HEREIN BY THIS REFERENCE, MUTATIS MUTANDIS.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Patent Security Agreement to be executed and delivered as of the day and year first above written.

GRANTOR:

GRADALIS, INC., a Delaware corporation

DocuSigned by:

By: David Shanahan
Name: Chairman
Title:

AGENT:

ACCEPTED AND ACKNOWLEDGED BY:

HC INNOVATIVE PARTNERS, LP a
Delaware limited partnership

By: WP Innovative Partners LLC, its general
partner

By: _____
Name: _____
Title: _____

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

PATENT
REEL: 051396 FRAME: 0371

IN WITNESS WHEREOF, the parties hereto have caused this Patent Security Agreement to be executed and delivered as of the day and year first above written.

GRANTOR:

GRADALIS, INC., a Delaware corporation


By: _____
Name: _____
Title: _____

AGENT:

ACCEPTED AND ACKNOWLEDGED BY:

HC INNOVATIVE PARTNERS, LP a
Delaware limited partnership

By: WP Innovative Partners LLC, its general
partner

By: 
Name: JOSEPH F. BERRY
Title: AUTHORIZED SIGNATORY

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

SCHEDULE I
to
PATENT SECURITY AGREEMENT

Patents

	Country	Title	Application No.	Patent No.	Filing Date
1.	United States of America	INDIVIDUALIZED CANCER THERAPY	12/609,462	8,916,530	30-Oct-2009
2.	United States of America	INDIVIDUALIZED CANCER THERAPY	14/071,490	9,382,589	04-Nov-2013
3.	United States of America	INDIVIDUALIZED CANCER THERAPY	14/535,789	9,528,991	07-Nov-2014
4.	United States of America	INDIVIDUALIZED CANCER THERAPY	15/173,395	9,914,977	03-Jun-2016
5.	United States of America	FURIN-KNOCKDOWN BI-FUNCTIONAL RNA	12/973,787	9,157,084	20-Dec-2010
6.	United States of America	FURIN-KNOCKDOWN BI-FUNCTIONAL RNA	14/844,912	9,695,422	03-Sep-2015
7.	United States of America	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	12/973,823	9,132,146	20-Dec-2010
8.	United States of America	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	14/815,721	9,790,518	31-Jul-2015
9.	United States of America	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	15/690,092	10,253,331	29-Aug-2017
10.	European Patent Convention	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	10840035.9	2515916	20-Dec-2010
11.	Germany	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	6020100311 30.9	2515916	20-Dec-2010
12.	France	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	10840035.9	2515916	20-Dec-2010
13.	United Kingdom	FURIN-KNOCKDOWN AND GM-CSF-AUGMENTED (FANG) CANCER VACCINE	10840035.9	2515916	20-Dec-2010
14.	Australia	FURIN-KNOCKDOWN AND GM-CSF-	2010333753	2010333753	20-Dec-2010

		AUGMENTED (FANG) CANCER VACCINE			
15.	Australia	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2013201841	2013201841	20-Dec- 2010
16.	Australia	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2015252009	2015252009	20-Dec- 2010
17.	China (People's Republic)	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2010800646 42.8	ZL201080064 642.8	20-Dec- 2010
18.	China (People's Republic)	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2018102434 19.8		20-Dec- 2010
19.	Japan	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2012-546121	5553906	20-Dec- 2010
20.	Japan	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2014-111779	5820506	20-Dec- 2010
21.	Korea, Republic of	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	10-2014- 7022999	10-1589951	20-Dec- 2010
22.	Singapore	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	2012046330	181880	20-Dec- 2010
23.	Singapore	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	201301171-3	188160	20-Dec- 2010
24.	Hong Kong	FURIN-KNOCKDOWN AND GM-CSF- AUGMENTED (FANG) CANCER VACCINE	19100699.3		20-Dec- 2010
25.	United States of America	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	12/875,723	8,333,988	03-Sep- 2010
26.	United States of America	TARGETED DELIVERY USING TISSUE- SPECIFIC	13/664,288	9,181,225	30-Oct- 2012

		PEPTIDOMIMETIC LIGANDS			
27.	European Patent Convention	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	10814574.9	2473182	03-Sep- 2010
28.	Germany	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	10814574.9	602010017592 .8	03-Sep- 2010
29.	China (People's Republic)	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	2014106556 209		03-Sep- 2010
30.	Israel	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	218445	218445	03-Sep- 2010
31.	Taiwan	TARGETED DELIVERY USING TISSUE- SPECIFIC PEPTIDOMIMETIC LIGANDS	102104486		03-Sep- 2009
32.	United States of America	NOVEL THERAPEUTIC RNA INTERFERENCE TECHNOLOGY TARGETED TO THE PDX-1 ONCOGENE IN PDX-1 EXPRESSING NEUROENDOCRINE TUMORS	12/913,515	8,361,983	27-Oct- 2010
33.	European Patent Convention	NOVEL THERAPEUTIC RNA INTERFERENCE TECHNOLOGY TARGETED TO THE PDX-1 ONCOGENE IN PDX-1 EXPRESSING NEUROENDOCRINE TUMORS	10827443.2	2507374	27-Oct- 2010
34.	United States of America	NOVEL SHRNA MOLECULES AND METHODS OF USE THEREOF	13/538,619	8,808,983	29-Jun- 2012
35.	United States of America	CONSTRUCTION OF BIFUNCTIONAL SHORT HAIRPIN RNA	14/271,039	9,290,763	06-May- 2014

36.	United States of America	NOVEL SHRNA MOLECULES AND METHODS OF USE THEREOF	14/318,163	9,556,431	27-Jun-2014
37.	United States of America	NOVEL SHRNA MOLECULES AND METHODS OF USE THEREOF	15/420,791		31-Jan-2017
38.	United States of America	NOVEL SHRNA MOLECULES AND METHODS OF USE THEREOF	13/538,853	8,735,058	29-Jun-2012
39.	United States of America	NOVEL SHRNA MOLECULES AND METHODS OF USE THEREOF	11/983,482	8,252,526	09-Nov-2007
40.	United States of America	DESIGN AND CONSTRUCTION OF BIFUNCTIONAL SHORT HAIRPIN RNA	13/364,053	8,758,998	01-Feb-2012
41.	United States of America	BI-FUNCTIONAL SHRNA TARGETING STATHMIN 1 AND USES THEREOF	13/410,130	8,906,874	01-Mar-2012
42.	European Patent Convention	HIGHLY PURE PLASMID DNA PREPARATIONS AND PROCESSES FOR PREPARING THE SAME	09739850.7	2283131	30-Apr-2009
43.	United States of America	POLYPEPTIDES HAVING COLANIC ACID-DEGRADING ACTIVITY	12/433,691	8,460,908	30-Apr-2009
44.	United States of America	PROCESSES FOR THE DIGESTION OF COLANIC ACID	12/433,701	8,647,857	30-Apr-2009
45.	United States of America	BI-FUNCTIONAL SHORT-HAIRPIN RNA (BI-SHRNA) SPECIFIC FOR SINGLE-NUCLEOTIDE KRAS MUTATIONS	13/890,957	9,353,373	09-May-2013
46.	European Patent Convention	BI-FUNCTIONAL SHORT-HAIRPIN RNA (BI-SHRNA) SPECIFIC FOR SINGLE-NUCLEOTIDE KRAS MUTATIONS	13788485.4		09-May-2013

47.	Japan	BI-FUNCTIONAL SHORT-HAIRPIN RNA (BI-SHRNA) SPECIFIC FOR SINGLE- NUCLEOTIDE KRAS MUTATIONS	2015-511715	6283661	09-May- 2013
48.	United States of America	MULTIPLE TARGETED BI-FUNCTIONAL SHRNA FOR THE TREATMENT OF LUNG CANCER	14/696,144	9,683,237	24-Apr- 2015
49.	European Patent Convention	MULTIPLE TARGETED BI-FUNCTIONAL SHRNA FOR THE TREATMENT OF LUNG CANCER	15783597.6		24-Apr- 2015
50.	Canada	MULTIPLE TARGETED BI-FUNCTIONAL SHRNA FOR THE TREATMENT OF LUNG CANCER	2,946,407		24-Apr- 2015

Patent Licenses

None.