

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT8083187

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
ACERAGEN, INC.	07/11/2023
ARREVUS, INC.	07/11/2023

RECEIVING PARTY DATA

Name:	NOVAQUEST CO-INVESTMENT FUND XV, L.P.
Street Address:	4208 SIX FORKS ROAD
Internal Address:	SUITE 920
City:	RALEIGH
State/Country:	NORTH CAROLINA
Postal Code:	27609

PROPERTY NUMBERS Total: 50

Property Type	Number
PCT Number:	US2009050353
Patent Number:	8450300
Patent Number:	8247394
Application Number:	13819917
Application Number:	61378032
PCT Number:	US2011047771
Application Number:	61489017
PCT Number:	US2012039219
Application Number:	62011215
PCT Number:	US2015035596
Application Number:	15317578
Application Number:	16278956
Application Number:	62809064
Application Number:	62981149
Application Number:	62950320
Application Number:	63129185
Application Number:	63009251
Application Number:	17466366

PATENT

Property Type	Number
Patent Number:	8202850
Patent Number:	8476416
Patent Number:	8716253
Patent Number:	8008267
Patent Number:	8946175
Patent Number:	8420615
Patent Number:	8357665
Patent Number:	8377898
Patent Number:	8426375
Patent Number:	8383598
Patent Number:	8399423
Patent Number:	9206430
Patent Number:	9453228
Patent Number:	8106173
Patent Number:	8759310
Patent Number:	9243050
Patent Number:	8853375
Patent Number:	8361986
Patent Number:	8853177
Patent Number:	8987221
Patent Number:	8431544
Patent Number:	8492358
Patent Number:	8486908
Patent Number:	9096858
Patent Number:	9540651
Patent Number:	8877722
Patent Number:	9260719
Patent Number:	10066230
Patent Number:	10041076
Patent Number:	9688993
Patent Number:	9828601
Application Number:	17226866

CORRESPONDENCE DATA

Fax Number: (919)781-4865

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.

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Address Line 2: SUITE 300
Address Line 4: RALEIGH, NORTH CAROLINA 27607

ATTORNEY DOCKET NUMBER: 024658.0128

NAME OF SUBMITTER: PERKY L. KARMIRE

SIGNATURE: /s/ Perky L. Karmire

DATE SIGNED: 07/28/2023

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8

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PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "*Patent Security Agreement*") is made effective as of July 11, 2023, by and from Arrevus, Inc., a Delaware Corporation, and Aceragen, Inc., a Delaware corporation (as successor in interest to Idera Pharmaceuticals, Inc), and together individually and collectively, the "*Grantor*" to and in favor of NovaQuest Co-Investment Fund XV, L.P., a Delaware limited partnership ("*Grantee*").

WHEREAS, Grantor and Grantee have entered into a Bridge Funding Agreement dated as of July 11, 2023 (as may be amended, restated, supplemented or otherwise modified from time to time, the "*Funding Agreement*").

WHEREAS, Grantor has entered into a Security Agreement in favor of Grantee dated as of July 11, 2023 (as may be amended, restated, supplemented or otherwise modified from time to time, the "*Security Agreement*").

WHEREAS, Grantor owns the patents listed on Schedule A attached hereto (the "*Patents*"), which Patents are pending or registered with the United States Patent and Trademark Office.

WHEREAS, this Patent Security Agreement has been executed in conjunction with the security interest granted under the Security Agreement to Grantee. In the event that any provisions of this Patent Security Agreement are deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall govern.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed that:

1. Definitions. All capitalized terms not defined herein shall have the respective meaning given to them in the Funding Agreement or the Security Agreement.

2. The Security Interest.

(a) This Patent Security Agreement is made to secure the prompt and complete payment and performance of all the Secured Obligations. Upon the occurrence of the Termination Date (as defined in the Security Agreement), Grantee shall promptly, upon such satisfaction, execute, acknowledge, and deliver to Grantor all reasonably requested instruments in writing releasing the security interest in the Patents acquired under the Security Agreement and this Patent Security Agreement.

(b) Grantor hereby pledges and grants to Grantee a security interest in all of Grantor's right, title and interest, wherever located and whether now owned or hereafter acquired, in and to (i) any and all patents and patent applications, including those listed on Schedule A hereto; (ii) all inventions and improvements described and claimed therein; (iii) all reissues, divisions, continuations, renewals, extensions, and continuations-in-part thereof; (iv) all income,

royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages and payments for past and future infringements thereof; (v) all rights to sue for past, present, and future infringements thereof; and (vi) all rights corresponding to any of the foregoing throughout the world.


3. Governing Law. **THIS PATENT SECURITY AGREEMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAW OF THE STATE OF NEW YORK.**

4. Recordation. Grantor hereby authorizes and requests that the Commissioner of Patents and Trademarks record this Patent Security Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, Grantor has executed this Patent Security Agreement effective as of the date first written above.

Aceragen, Inc. DocuSigned by:

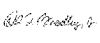
By: 
Name: John Taylor
Title: CEO

Arrevas, Inc. DocuSigned by:

By: 
Name: John Taylor
Title: CEO

NovaQuest Co-Investment Fund XV, L.P.

By: NO POF V GP, Ltd., its general partner

DocuSigned by:

By: _____
Name: John L. Bradley, Jr.
Title: Director

Schedule A**Patents**

Patent / Patent Application Number	Jurisdiction	Title	Status	Filing Date	Publication Number/ Publication Date
PCT/UC2009/050353	United States of America	Fusidic Acid Dosing Regimens For Treatment of Bacterial Infections	Expired	N/A	N/A
8450300	United States of America	Fusidic Acid Dosing Regimens For Treatment of Bacterial Infections	Granted	May 28, 2013	N/A
8247394	United States of America	Methods of Treating Urethritis and Related Infections Using Fusidic Acid	Granted	August 21, 2012	N/A
13/819,917	United States of America	Methods of Treating Bacterial Infections Through Pulmonary Delivery of Fusidic Acid	Expired	N/A	N/A
61/378,032	United States of America	Methods of Treating Bacterial Infections Through Pulmonary Delivery of Fusidic Acid	Expired	N/A	N/A
PCT/US2011/047771	United States of America	Methods of Treating Bacterial Infections Through Pulmonary Delivery of Fusidic Acid	Abandoned	N/A	N/A
61/489,017	United States of America	COMPOSITIONS COMPRISING FUSIDIC ACID AND PACKAGES THEREOF	Expired	N/A	N/A
PCT/US2012/039219	United States of America	COMPOSITIONS COMPRISING FUSIDIC ACID AND PACKAGES THEREOF	Expired	N/A	N/A
62/011,215	United States of America	COMPOSITIONS AND METHODS FOR TREATING BONE AND JOINT INFECTIONS	Expired	N/A	N/A
PCT/US2015/035596	United States of America	COMPOSITIONS AND METHODS FOR TREATING BONE AND JOINT INFECTIONS	Expired	N/A	N/A
15/317,578	United States of America	COMPOSITIONS AND METHODS FOR TREATING BONE AND JOINT INFECTIONS	Abandoned	N/A	N/A

Patent / Patent Application Number	Jurisdiction	Title	Status	Filing Date	Publication Number/ Publication Date
16/278,956	United States of America	COMPOSITIONS AND METHODS FOR TREATING BONE AND JOINT INFECTIONS	Abandoned	N/A	N/A
62/809,064	United States of America	COMPOSITIONS AND METHODS FOR TREATING RESPIRATORY DISEASES	Abandoned	N/A	N/A
62/981,149	United States of America	COMPOSITIONS AND METHODS FOR TREATING RESPIRATORY DISEASES	Abandoned	N/A	N/A
62/950,320	United States of America	COMPOSITIONS AND METHODS FOR TREATING RESPIRATORY DISEASES	Abandoned	N/A	N/A
63/129,185	United States of America	COMPOSITIONS AND METHODS FOR TREATING RESPIRATORY DISEASES	Abandoned	N/A	N/A
63/009,251	United States of America	COMPOSITIONS AND METHODS FOR TREATING RESPIRATORY DISEASES	Abandoned	N/A	N/A
17/466,366	United States of America	COMPOSITIONS COMPRISING FUSIDIC ACID AND PACKAGES THEREOF	Pending	N/A	N/A
8,202,850	United States of America	MODULATION OF IMMUNOSTIMULATORY PROPERTIES OF OLIGONUCLEOTIDE-BASED COMPOUNDS BY OPTIMAL PRESENTATION OF 5' ENDS	Granted	January 19, 2012	N/A
8,476,416	United States of America	MODULATION OF IMMUNOSTIMULATORY ACTIVITY OF IMMUNOSTIMULATORY OLIGONUCLEOTIDE ANALOGS BY POSITIONAL CHEMICAL CHANGES	Granted	July 2, 2013	N/A

Patent / Patent Application Number	Jurisdiction	Title	Status	Filing Date	Publication Number/ Publication Date
8,716,253	United States of America	MODULATION OF IMMUNOSTIMULATORY ACTIVITY OF IMMUNOSTIMULATORY OLIGONUCLEOTIDE ANALOGS BY POSITIONAL CHEMICAL CHANGES	Granted	May 6, 2014	N/A
8,008,267	United States of America	Stabilized immunomodulatory oligonucleotides	Granted	August 30, 2011	N/A
8,946,175	United States of America	STABILIZED IMMUNOMODULATORY OLIGONUCLEOTIDES	Granted	February 3, 2015	N/A
8,420,615	United States of America	IMMUNOSTIMULATORY OLIGONUCLEOTIDE MULTIMERS	Granted	April 16, 2013	N/A
8,357,665	United States of America	Immune regulatory oligonucleotide (IRO) compounds to modulate toll-like receptor based immune response	Granted	January 22, 2013	N/A
8,377,898	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	February 19, 2013	N/A
8,426,375	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	April 23, 2013	N/A
8,383,598	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	February 26, 2013	N/A
8,399,423	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	March 19, 2013	N/A
9,206,430	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	December 8, 2015	N/A
9,453,228	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE	Granted	September 27, 2016	N/A

Patent / Patent Application Number	Jurisdiction	Title	Status	Filing Date	Publication Number/ Publication Date
		TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE			
8,106,173	United States of America	STABILIZED IMMUNE MODULATORY RNA (SIMRA) COMPOUNDS FOR TLR7 AND TLR8	Granted	January 31, 2012	N/A
8,759,310	United States of America	STABILIZED IMMUNE MODULATORY RNA (SIMRA) COMPOUNDS FOR TLR7 AND TLR8	Granted	June 24, 2014	N/A
9,243,050	United States of America	STABILIZED IMMUNE MODULATORY RNA (SIMRA) COMPOUNDS FOR TLR7 AND TLR8	Granted	January 26, 2016	N/A
8,853,375	United States of America	TOLL LIKE RECEPTOR MODULATORS	Granted	October 7, 2014	N/A
8,361,986	United States of America	NOVEL SYNTHETIC AGONISTS OF TLR9	Granted	January 29, 2013	N/A
8,853,177	United States of America	USE OF INHIBITORS OF TOLL-LIKE RECEPTORS IN THE PREVENTION AND TREATMENT OF HYPERCHOLESTEROLEMIA AND HYPERLIPIDEMIA AND DISEASES RELATED THERETO	Granted	October 7, 2014	N/A
8,987,221	United States of America	POTENTIATION OF AUTOIMMUNE POTENTIATION OF AUTOIMMUNE AND INFLAMMATORY DISEASE TREATMENTS BY IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) ANTAGONISTS OF TLR7 AND TLR9	Granted	March 24, 2015	N/A
8,431,544	United States of America	COMPOSITION FOR INHIBITING GENE EXPRESSION AND USES THEREOF	Granted	April 30, 2013	N/A
8,492,358	United States of America	NOVEL AGONISTS OF TOLL-LIKE RECEPTOR 3 AND METHODS OF THEIR USE	Granted	July 23, 2013	N/A

Patent / Patent Application Number	Jurisdiction	Title	Status	Filing Date	Publication Number/ Publication Date
8,486,908	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	July 16, 2013	N/A
9,096,858	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	August 4, 2015	N/A
9,540,651	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	January 10, 2017	N/A
8,877,722	United States of America	COMPOSITIONS FOR INHIBITING GENE EXPRESSION AND USES THEREOF	Granted	November 4, 2014	N/A
9,260,719	United States of America	Immune regulatory oligonucleotide (IRO) compounds to modulate toll-like receptor based immune response	Granted	February 16, 2016	N/A
10,066,230	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	September 4, 2018	N/A
10,041,076	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	August 7, 2018	N/A
9,688,993	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	June 27, 2017	N/A
9,828,601	United States of America	IMMUNE REGULATORY OLIGONUCLEOTIDE (IRO) COMPOUNDS TO MODULATE TOLL-LIKE RECEPTOR BASED IMMUNE RESPONSE	Granted	November 28, 2017	N/A
17/226,866	United States of America	USE OF A TLR9 AGONIST IN METHODS FOR TREATING COVID-19	Published	April 9, 2021	

PATENT**RECORDED: 07/28/2023****REEL: 064419 FRAME: 0503**