504358824 05/09/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4405516

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
BOB D. BROWN	11/12/2013
HENRYK T. DUDEK	11/12/2013

RECEIVING PARTY DATA

Name:	DICERNA PHARMACEUTICALS, INC.		
Street Address:	480 ARSENAL STREET		
Internal Address:	SUITE 120		
City:	WATERTOWN		
State/Country:	MASSACHUSETTS		
Postal Code:	02472		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	14952909	

CORRESPONDENCE DATA

Fax Number: (703)997-4905

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: 7039170000

Email: swilliams@mh2law.com

MH2 TECHNOLOGY LAW GROUP, LLP Correspondent Name:

Address Line 1: 1951 KIDWELL DRIVE

Address Line 2: SUITE 550

Address Line 4: TYSONS CORNER, VIRGINIA 22182

ATTORNEY DOCKET NUMBER:	0243.0014-01
NAME OF SUBMITTER:	TIMOTHY B. DONALDSON
SIGNATURE:	/Timothy B. Donaldson/
DATE SIGNED:	05/09/2017

Total Attachments: 5

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> PATENT REEL: 042307 FRAME: 0039

ASSIGNMENT BY INVENTOR

THIS ASSIGNMENT, made this 12 day of November, 2013, by Bob D. Brown and Henryk T. Dudek (hereinafter referred to as Assignors), residing at 54 Leprechaun Drive, Millington, New Jersey 07946; and 105 Overbrook Drive, Wellesley, Massachusetts 02482, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in METHODS AND COMPOSITIONS FOR THE SPECIFIC INHIBITION OF HIF-ta BY DOUBLE-STRANDED RNA, set forth in a Patent application for Letters Patent of the United States, already filed on July 15, 2013 as U.S. Application No. 13/942,014; and

WHEREAS, Dicerna Pharmaceuticals, Inc., a corporation organized under and pursuant to the laws of Massachusetts having its principal place of business at 480 Arsenal Street, Suite 120, Watertown, Massachusetts 02472 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged. Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

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AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns that: Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise; that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; and, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

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EDWARDS WILDMAN PALMER LLP

All practitioners at Customer Number 21874

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

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AM 25168783.1

11/12/2015 Bob D. Brown

Date: 1112	<u> </u>
United States of America State of County of H	MA ss.:
On thisd. personally came described in and who execute of the same.	ay of November , 2013 , before me Bob D. Brown , to me known to be the individual cuted the foregoing instrument, and acknowledged execution
ox eno sumo.	Notary Public 2/28/19

					QQQ
Date: #	[2 3		Henry	k T. Dudek)	
United States of Am State of County of	erica MA Hidolesex) } ss:31 }			
personally came	day of <u>VOUEYN k</u> Henryk T. Duds executed the foregoing i	<u>k</u> , 1	to me knov	vn to be the	individual
		Nationary P		kunel	19

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RECORDED: 05/09/2017