505468885 05/09/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5515688

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FRANK DEROSA	06/06/2017
MICHAEL HEARTLEIN	06/06/2017
DANIEL CRAWFORD	06/19/2018
SHRIRANG KARVE	06/06/2017

RECEIVING PARTY DATA

Name:	RANA THERAPEUTICS	
Street Address:	128 SPRING STREET	
City:	LEXINGTON	
State/Country:	MASSACHUSETTS	
Postal Code:	02421	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16280772	

CORRESPONDENCE DATA

Fax Number: (617)526-9899

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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Email:oandrews@proskauer.comCorrespondent Name:PROSKAUER ROSE LLP

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Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER:	MRT-1237US1
NAME OF SUBMITTER:	FANGLI CHEN
SIGNATURE:	/Fangli Chen/
DATE SIGNED:	05/09/2019

Total Attachments: 8

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PATENT 505468885 REEL: 049132 FRAME: 0027

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PATENT REEL: 049132 FRAME: 0028

JOINT ASSIGNMENT

WHEREAS, each of the below-named inventors whose name and residence is set forth in the following Table 1:

Inventor Name	City, State
1. Frank DeRosa	Lexington, Massachusetts
2. Michael Heartlein	Lexington, Massachusetts
3. Daniel Crawford	Lexington, Massachusetts
4. Shrirang Karve	Lexington, Massachusetts

Table 1

hereby declares and agrees, on behalf of himself/herself and all of his/her successors and assigns that each is aware of the patent application(s) entitled:

MULTIMERIC CODING NUCLEIC ACID AND USES THEREOF

prepared for filing in the United S	States Patent and Trademark Office; or
X identified by United States Applifiled in the United States Patent and Traden	
identified by International Patent	Application No; and
X and is also aware of the following	g priority applications:
Serial No.	Filed
62/320,073	April 8, 2016

WHEREAS RaNA Therapeutics (hereinafter "ASSIGNEE"), having a usual place of business at 128 Spring Street, Lexington, MA, 02421, desires to acquire or confirm an interest therein;

NOW, THEREFORE, to all whom it may concern be it known that, in consideration of agreements previously and duly entered into between the parties, and/or for other good and valuable consideration, the receipt of which is hereby acknowledged, each of us has sold, assigned, and transferred and/or do hereby sell, assign, and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, my entire right, title, and interest in and throughout the United States of America, its territories and all foreign countries, in and to any and all inventions described in the patent application, and/or any priority applications noted above, including any right of priority

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thereto; and hereby confirm that my sale, assignment and transfer is and was effective at least as of the filing date of the patent application and/or priority application. Our sale, assignment and transfer applies to the above-referenced patent application, and to any application that is based in whole or in part on the patent application, including any divisional, continuing, substitute, renewal, reissue, reexamination and other applications, for example that claim priority to the patent application. Also, this sale, assignment and transfer pertains to any and all other rights arising under or pursuant to any and all international agreements, treaties, or laws relating to the protection of industrial property, including all rights of priority under the International Convention for the Protection of Industrial Property, and in and to any such patent(s) as may issue thereon including any and all original and reissued patents which have been or shall be issued in the United States and foreign countries; said inventions, applications, and patent(s) to be held and enjoyed by ASSIGNEE for its own use and for its successors, assigns and legal representatives, to the full end of the term for which said patent(s) may be granted as fully and entirely as the same would have been held by each of us had this sale, assignment and transfer not been made;

AND, each of us hereby acknowledges that this Assignment, being of our entire right, title, and interest in and to the inventions, carries with it the right in ASSIGNEE, by attorneys and agents of ASSIGNEE selection, to apply for and receive any and all patent(s) for said inventions in its own name;

AND, each of us hereby further agrees for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the patent(s) to ASSIGNEE, its successors, assignees, and legal representatives, but at its expense and charges, including the execution of application for patents in foreign countries, the execution of substitution, reissue, divisional or continuation applications, and the giving of testimony, preliminary statements, or other statements in any interference or other proceeding in which the inventions or any applications or patents directed to the inventions may be involved by communicating to the ASSIGNEE all facts we know relating to the inventions and their history, and generally by doing everything possible which ASSIGNEE shall consider desirable for aiding in securing and maintaining proper patent protection for the inventions and for vesting title in the inventions and all applications for patent and all patents on the inventions in ASSIGNEE;

AND, each of us further hereby authorizes ASSIGNEE or its attorneys or agents to insert the correct serial number(s) and/or filing date(s) into this assignment document, if appropriate;

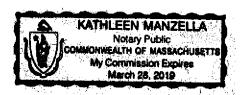
AND, each of us hereby appoints ASSIGNEE as my common agent for purposes of prosecuting international patent applications and any national patent applications for which such common agency is recognized;

AND, each of us hereby requests the Commissioner for Patents of the United States Patent and Trademark Office to issue any and all patent(s) as shall be granted upon said application or applications based thereon to ASSIGNEE, its successors, assigns, and legal representatives;

AND, each of us covenants with said ASSIGNEE that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by us, and that full right to convey the same as herein expressed is possessed by us.

		ledged and agreed to by: herapeutics
	By: Name: Title: Date:	Pull Main Rondall Mocin VP IP July 19,2018
STATE OF <u>Massachuse</u> COUNTY OF <u>Middlesey</u>	tto	
Before me this 19 day of Jan. **Refore me this 19 day of Jan. **	uang wn to 1	d proved to me through satisfactory to be the person whose name is
same, of his/her own free will and for the	purposes so	et forth.
	Name: 1	ission Expires: march 28, 2019
		KATHLEEN MANZELLA Notary Public COMMONWEATH OF MASSACHUSETTS My Commission Expires March 28, 2019

SIGNED this 6 day of June, 20 17
Frank DeRosa
STATE OF <u>Massachuse#</u> s
COUNTY OF MIddlesex
Before me this day of, 20/7, personally appeared, and proved to me through satisfactory evidence of identity which was
same, of his/her own free will and for the purposes set forth.
NOTARY PUBLIC <u>Kathleer Mounzella</u> Name: <u>Kathleen Manzella</u> My Commission Expires: <u>March 28, 2019</u>



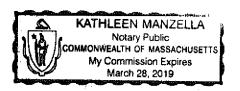
SIGNED this 06 day of June,/2017
Michael Heartlein
STATE OF Massachusells SS. COUNTY OF Middlesek
Before me this /o day of Tux 20 /7, personally appeared
Michael Heartlein , and proved to me through satisfactory
evidence of identity which was KADWU to me to be the person whose name is signed on the preceding or attached document, and acknowledged that he/she executed the same, of his/her own free will and for the purposes set forth.
NOTARY PUBLIC <u>KOULLEN MANZELLA</u> Name: <u>Kathleen Manzella</u> My Commission Expires: <u>March</u> 28,2019



SIG	NED this 1944	_day of
		Daniel Crawford
STATE OF	Massachusetts	·
COUNTY OF	Sellon	-SS.
Before me this	19th day of _) , 20 K, personally appeared
I	Daniel Crawford	and proved to me through satisfactory
evidence of idea		West Lange to be the person whose name is
signed on the pr	eceding or attached d	ocument, and acknowledged that he/she executed the
same, of his/her	own free will and for	the purposes set forth.
		NOTARY PUBLIC Name: My Commission Expires: Notary Public Name:



SIGNED this 6 day of Tune, 2017
S.S. Kourve Shrirang Karve
STATE OF Massachusetts
COUNTY OF Middlesex SS.
Before me this <u>lo</u> day of <u>lunu</u> , 20/7, personally appeared Shrirang Karve , and proved to me through satisfactory evidence of identity which was <u>Known to</u> me to be the person whose name is signed on the preceding or attached document, and acknowledged that he/she executed the same, of his/her own free will and for the purposes set forth.
NOTARY PUBLIC <u>Kathleen Manzella</u> Name: <u>Kathleen Manzella</u> My Commission Expires: <u>March 28, 2019</u>



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