PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DIPENDRA GYAWALI	05/06/2022
SERENUS HUA	05/10/2022
GABOR BUTORA	05/17/2022
GREGORY JOHN MERCER	05/13/2022

RECEIVING PARTY DATA

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State/Country:	MASSACHUSETTS
Postal Code:	02139

PROPERTY NUMBERS Total: 5

Property Type	Number
Application Number:	63151523
Application Number:	63182428
Application Number:	63191655
Application Number:	17508786
PCT Number:	US2022016902

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NAME OF SUBMITTER:	COURTENAY C. BRINCKERHOFF
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507322179 PATENT REEL: 060121 FRAME: 0981

Total Attachments: 10
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PATENT REEL: 060121 FRAME: 0982

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

ModernaTX, Inc. 200 Technology Square Cambridge MA 02139 US

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to the invention relating to

LIPID NANOPARTICLE COMPOSITIONS AND METHODS OF FORMULATING THE SAME

as set forth in the following patent applications:

U.S. Provisional Application No. 63/151,523 Filed February 19, 2021

U.S. Provisional Application No. 63/182,428 Filed April 30, 2021

U.S. Provisional Application No. 63/191,655 Filed May 21, 2021

U.S. Patent Application No. 17/508,786 Filed 10/22/2021

PCT Application No. PCT/US2022/016902 Filed February 18, 2022

TW Patent Application No. 111106019 Filed February 18, 2022

EP Patent Application No. 22153335.9 Filed January 25, 2022

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the

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name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the Patent Cooperation Treaty, the Paris Convention, any other international agreement, or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; (d) to provide all reasonable assistance to ASSIGNEE. its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto and (e) to not challenge or otherwise contest or assist in the challenge or contestation of validity, enforceability, or infringement, or ownership of or title to any Letters Patent or patent rights granted on said invention(s), improvements, and modifications, in the United States and its territories and all countries foreign thereto, and hereby waives all rights to challenge validity, enforceability, or infringement, or ownership of or title to said Letters Patent and patent rights in the United States and its territories and all countries foreign thereto, including in a U.S. Patent and Trademark Office proceeding, U.S. federal court proceeding, U.S. state court proceeding, and before any other tribunal and in any other forum, whether legal, administrative or otherwise, whether in the United States or its territories or a country foreign thereto, for the full term or terms for which the same may be granted, including any post-grant extensions thereof.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **Foley & Lardner LLP** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

NAME AND SIGNATURE OF INVENTOR

Name:	DIPENDRA GYAWALI		,
Signature:	- the same	Date:	05/06/2022
NAME AND	SIGNATURE OF WITNESSES		
Name: Signature	Ryan Grady Re	Date:	5/4/2022
NAME AND	SIGNATURE OF INVENTOR		
Name:	SERENUS HUA		
Signature:		Date:	
<u>NAME AND</u>	SIGNATURE OF WITNESSES		
Name:			
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PATENT REEL: 060121 FRAME: 0985

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Name:	GABOR BUTORA		·
Signature:		Date:	
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NAME AND SIGNATURE OF INVENTOR

Atty. Dkt. No. 131986-0203

ACCEPTED BY ASSGINEE

Date:

Name: Debat. Milasinic

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Title:

le: SUP Intellectual Papert

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NAME AND SIGNATURE OF INVENTOR

Name:	DIPENDRA GYAWALI		n
Signature:		Date:	
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NAME AND	SIGNATURE OF WITNESS		
Name:			
Signature		Date:	

ACCEPTED BY ASSGINEE

	ModernaTX, Inc.	
Date:	Ву:	_
	Name:	_
	Title:	

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