

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT8039972

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
FRANK DEROSA	10/28/2021
SHRIRANG KARVE	10/29/2021
ANUSHA DIAS	10/29/2021
REBECCA L. GOLDMAN	10/29/2021
KHANG ANH TRAN	10/29/2021
HARDIP RAJESHBHAI GOPANI	11/01/2021
ASHISH L. SARODE	10/29/2021
ASAD KHANMOHAMMED	11/01/2021
NATALIA VARGAS MONTOYA	10/29/2021
PRIYAL PATEL	11/01/2021

**RECEIVING PARTY DATA**

<b>Name:</b>	TRANSLATE BIO MA, INC.
<b>Street Address:</b>	29 HARTWELL AVENUE
<b>City:</b>	LEXINGTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02421

**PROPERTY NUMBERS Total: 3**

Property Type	Number
Application Number:	17520200
Application Number:	17810055
Application Number:	17810064

**CORRESPONDENCE DATA**

Fax Number: (857)300-4001

*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: (857) 300-4000

Email: leslie.roberts@lathropgpm.com, internalip@lathropgpm.com

Correspondent Name: LATHROP GPM LLP

Address Line 1: 28 STATE STREET

Address Line 2: 7TH FLOOR

PATENT

**Address Line 4:** BOSTON, MASSACHUSETTS 02109

**ATTORNEY DOCKET NUMBER:** SA9-323 FAMILY - 1 OF 5

**NAME OF SUBMITTER:** JAMES H. VELEMA, ESQ.

**SIGNATURE:** /James H. Velema/

**DATE SIGNED:** 07/05/2023

**Total Attachments: 12**

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**JOINT ASSIGNMENT**

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

<b>Inventor Name</b>	<b>City, State</b>
1. Frank DeRosa	Chelmsford, MA
2. Shrirang Karve	Acton, MA
3. Anusha Dias	Medfield, MA
4. Rebecca L. Goldman	Lexington, MA
5. Khang Anh Tran	Quincy, MA
6. Hardip Rajeshbhai Gopani	Woburn, MA
7. Ashish L. Sarode	Lowell, MA
8. Asad Khanmohammed	Boston, MA
9. Natalia Vargas Montoya	Somerville, MA
10. Priyal Patel	Somerville, MA

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:

**Lipid Nanoparticles for Delivering mRNA Vaccines**

identified by European Patent Application No. EP 21315198.8  
filed on; October 13, 2021; and

identified by United States Application Serial No. 63/212,523  
filed in the United States Patent and Trademark Office on; June 18, 2021;

and is also aware of the following priority application:

<b>Serial No.</b>	<b>Filed</b>
63/110,965	November 6, 2020

WHEREAS Translate Bio MA, Inc. (hereinafter "ASSIGNEE"), having a usual place of business at 29 Hartwell Avenue, 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 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.

Acknowledged and agreed to by:  
Translate Bio MA, Inc.

By: *Randall Morin*

Name: Randall Morin

Title: Senior Vice President, Legal

Date: November 2, 2021

**WITNESSES**

Witness Signature: *Katie Manzella*

Witness Name: Katie Manzella

Witness Date: 11/2/21

Witness Signature: *Sharon Walker*

Witness Name: Sharon Walker

Witness Date: November 2, 2021

SIGNED this 28th day of October, 2021

Frank DeRosa

Frank DeRosa

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 10/28/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: October 28, 2021

SIGNED this 29 day of October, 2021

S S Karve

Shrirang Karve

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: October 29, 2021

SIGNED this 29 day of October, 2021

Anusha Dias  
Anusha Dias

**WITNESSES**

Witness Signature: Katie Manzella

Witness Signature: Sharon Walker

Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Name: Sharon Walker  
Witness Date: October 29, 2021

SIGNED this 29 day of October, 2021

Rebecca Goldman  
Rebecca L. Goldman

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: October 29, 2021



SIGNED this 29 day of October, 2021

*Khang Anh Tran*  
Khang Anh Tran

**WITNESSES**

Witness Signature: *Katie Manzella*  
Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Signature: *Sharon Walker*  
Witness Name: Sharon Walker  
Witness Date: October 29, 2021

SIGNED this 01 day of November, 20 21

H.R.Gopani  
Hardip Rajeshbhai Gopani

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 11/1/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: November 1, 2021

SIGNED this 29th day of October, 20 21



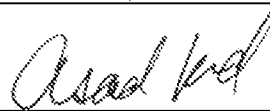
\_\_\_\_\_  
Ashish L. Sarode

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: October 29, 2021

SIGNED this 1st day of November, 2021



Asad Khanmohammed

**WITNESSES**

Witness Signature: Katie Manzella

Witness Name: Katie Manzella

Witness Date: 11/1/21

Witness Signature: Sharon Walker

Witness Name: Sharon Walker

Witness Date: November 1, 2021

SIGNED this 29th day of October, 2021

*Natalia Vargas Montoya*  
Natalia Vargas Montoya

**WITNESSES**

Witness Signature: *Katie Manzella*  
Witness Name: Katie Manzella  
Witness Date: 10/29/21

Witness Signature: *Sharon Walker*  
Witness Name: Sharon Walker  
Witness Date: October 29, 2021

SIGNED this 1st day of November, 2021

Priyal  
Priyal Patel

**WITNESSES**

Witness Signature: Katie Manzella  
Witness Name: Katie Manzella  
Witness Date: 11/1/21

Witness Signature: Sharon Walker  
Witness Name: Sharon Walker  
Witness Date: November 1, 2021