PUBLIC HEALTH SERVICE

# MATERIAL TRANSFER AGREEMENT

This Material Transfer Agreement ("MTA") has been adopted for use by the National Institutes of Health, the Food and Drug Administration and the Centers for Disease Control and Prevention, collectively referred to herein as the Public Health Service ("PHS") in all transfers of research material (Research Material) whether PHS is identified below as its Provider or Recipient.

Providers: *National Institute of Allergy and Infectious Diseases, National Institutes of Health ("NIAID")*
ModernaTX, Inc ("Moderna")

Recipient: The University of North Carolina at Chapel Hill

1. Provider agrees to transfer to Recipient's Investigator the following Research Material:

   mRNA coronavirus vaccine candidates developed and jointly-owned by NIAID and Moderna.

2. THIS RESEARCH MATERIAL MAY NOT BE USED IN HUMAN SUBJECTS. The Research Material will only be used for research purposes by Recipient's Investigator in his/her laboratory, for the research project described below, under suitable containment conditions. **This Research Material will not be used for commercial purposes such as screening, production or sale, for which a commercialization license may be required.** Recipient agrees to comply with all Federal rules and regulations applicable to the Research Project and the handling of the Research Material.

   a. Are the Research Materials of human origin?

   ___ Yes X No

   b. If Yes in 2a, were Research Materials collected according to 45 CFR Part 46, "Protection of Human Subjects"?

   ___Yes Please provide Assurance Number: _____
   ___No

3. This Research Material will be used by Recipient's Investigator solely in connection with the following research project ("Research Project") described with specificity as follows (use an attachment page if necessary):

   Perform challenge studies with the mRNA vaccine in a Proprietary Info model as described on Exhibit A.

4. Upon a Provider's reasonable request, Recipient will furnish a status report to such Provider regarding the use of the Research Materials and any data or results generated therefore. In all oral presentations or written publications concerning the Research Project, Recipient will acknowledge Providers' contribution of this Research Material unless requested otherwise. To the extent permitted by law, Recipient agrees to treat in confidence, and not to disclose to third parties or use for any purpose other than the performance of the Research Project, for a period of three (3) years from the date of its disclosure, any of Providers' written information about this Research Material that is stamped "CONFIDENTIAL," except for information that was previously known to Recipient or that is or becomes publicly available or which is disclosed to Recipient without a confidentiality obligation. Any oral disclosures from Providers to Recipient shall be identified as being CONFIDENTIAL by notice delivered to Recipient within ten (10) days after the date of the oral disclosure. Notwithstanding the foregoing, all information disclosed by Providers relating to Proprietary Info Proprietary Info of the Research Material will be treated as CONFIDENTIAL information as set forth above, whether or not marked or otherwise identified as "confidential." Recipient may publish or otherwise

publicly disclose the results of the Research Project, but if Providers have given CONFIDENTIAL information to Recipient such public disclosure may be made only after Providers have had thirty (30) days to review the proposed disclosure to determine if it includes any CONFIDENTIAL information, except when a shortened time period under court order, law (including the North Carolina Public Records Act), or the Freedom of Information Act pertains. Recipient will comply with all requests to delete CONFIDENTIAL information from any proposed publication or presentation; provided, that Providers agree to allow use of sufficient information regarding the identity and properties of the Research Material to reasonably enable publication of the results of the Research Project.

5. This Research Material represents a significant investment on the part of Providers and is considered proprietary to Providers. Recipient's Investigator therefore agrees to retain control over this Research Material and further agrees not to transfer the Research Material to other people not under her or his direct supervision without advance written approval of Provider. Providers reserve the right to distribute the Research Material to others and to use it for their own purposes. **When the Research Project is completed or three (3) years have elapsed, whichever occurs first, the Research Material will be disposed of as directed by Providers.**

6. This Research Material is provided as a service to the research community. IT IS BEING SUPPLIED TO RECIPIENT WITH NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Provider makes no representations that the use of the Research Material will not infringe any patent or proprietary rights of third parties.

7. Inventorship of any inventions or discoveries arising from the use of the Research Material hereunder ("Inventions"), shall be determined according to U.S. patent law. Ownership shall follow inventorship. Recipient will promptly disclose to Moderna in writing any Inventions. Proprietary Info
Proprietary Info
Proprietary Info Unless prohibited by law from doing so, including the North Carolina Tort Claims Act, Recipient agrees to hold the United States Government harmless and to indemnify the Government for all liabilities, demands, damages, expenses and losses arising out of Recipient's use for any purpose of the Research Material.

8. The undersigned Providers and Recipient expressly certify and affirm that the contents of any statements made herein are truthful and accurate.

9. This MTA shall be construed in accordance with Federal law as applied by the Federal courts in the District of Columbia.

SIGNATURES BEGIN ON NEXT PAGE

# MATERIAL TRANSFER AGREEMENT

## SIGNATURE PAGE

**FOR RECIPIENT:**

*Recipient's Investigator*

Ralph Baric, PhD
Professor

Date: 12/12/2019

Mailing Address for Materials:

Attention: Dr. Rachel Graham, Department of Epidemiology, University of North Carolina at Chapel Hill, 135 Dauer Drive, 2101 McGavran-Greenberg Hall, CB #7435, Chapel Hill, NC 27599-7435

Tel:919-966-3895 Fax: _____

*Duly Authorized*

Jacqueline Quay
Director, Licensing & Innovation Support, OTC

Date: 12/16/19

Mailing Address for Notices:

The University of North Carolina at Chapel Hill
Office of Technology Commercialization
109 Church Street, Chapel Hill, NC 27516

Tel: 919-966-3929 Fax: 919-962-0646

**FOR PROVIDERS:**

*NIAID's Investigator*

Barney Graham, MD, PhD

Date: _____

*Duly Authorized*

Amy F. Petrik -S
Digitally signed by Amy F. Petrik -S
Date: 2019.12.12 08:05:22 -05'00'

Amy Petrik, PhD
Technology Transfer Specialist, TTIPO, NIAID

Date: _____

Mailing Address for Notices:

Technology Transfer and Intellectual Property Office
National Institute of Allergy and Infectious Diseases
Department of Health and Human Services
Suite 6D, MSC 9804
5601 Fishers Lane
Rockville, MD 20852
Tel: 301/496-2644 Fax: 240-627-3117

*Moderna's Investigator*

Sunny Himansu, PhD

Date: 12/17/2019

*Duly Authorized*

Shaun Ryan
Deputy General Counsel

Date: 12/17/19

Mailing Address for Notices:

ModernaTX, Inc.
200 Technology Square
Cambridge, MA 20139
Attn: General Counsel

**Exhibit A**
**Research Program**

Proprietary Info

# PUBLIC HEALTH SERVICE

## NON-EXCLUSIVE PATENT LICENSE AGREEMENT FOR INTERNAL RESEARCH USE

*and*

## BIOLOGICAL MATERIALS LICENSE AGREEMENT - *Internal Use*

This **Agreement** is based on the model Non-Exclusive Patent Internal Use Agreement adopted by the U.S. Public Health Service ("**PHS**") Technology Transfer Policy Board for use by components of the National Institutes of Health ("**NIH**"), the Centers for Disease Control and Prevention ("**CDC**"), and the Food and Drug Administration ("**FDA**"), which are agencies of the **PHS** within the Department of Health and Human Services ("**HHS**").

This Cover Page identifies the Parties to this **Agreement**:

The U.S. Department of Health and Human Services, as represented by
National Institute of Allergy and Infectious Diseases
an Institute or Center (hereinafter referred to as the "**NIAID**") of the
**NIH**

and

ModernaTX, Inc.,
hereinafter referred to as the "**Licensee**",
having offices at 320 Bent Street 3rd Floor, Cambridge, MA 02141,
created and operating under the laws of Delaware.
**Tax ID No.:** 27-0226313