

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 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

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SIGNATURE PAGE

FOR RECIPIENT:

Recipient's Investigator



Ralph Baric, PhD
Professor

Date: 12/12/2019

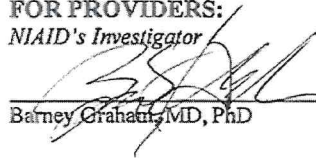
Mailing Address for Materials:

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: _____

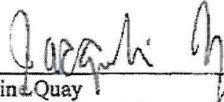
FOR PROVIDERS:

NIAID's Investigator


Barney Graham, MD, PhD

Date: _____

Duly Authorized


Jacquelin 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

Duly Authorized

Amy F. Petrik-S
Amy Petrik, PhD
Technology Transfer Specialist, TTIPO, NIAID

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

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

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