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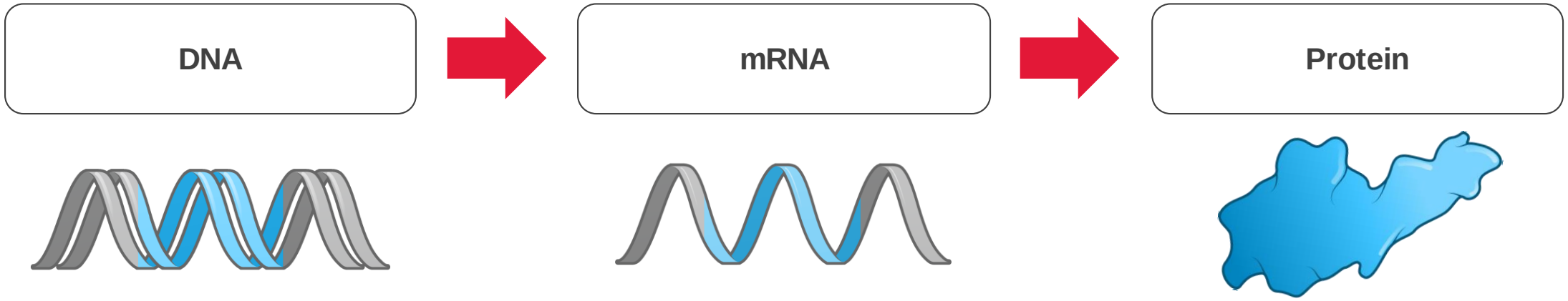

Moderna COVID-19 Vaccine Update

January 25th, 2021

Forward-looking statements and disclaimer

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including statements regarding: the Company's development of a vaccine against the novel coronavirus (SARS-CoV-2); the potential for the Moderna COVID-19 Vaccine to prevent COVID-19 disease and slow the spread of SARS-CoV-2 by producing neutralizing titers against new, emerging strains of SARS-CoV-2, including the B.1.1.7 and B.1.351 variants; plans to test additional booster doses of the Moderna COVID-19 Vaccine against emerging strains of SARS-CoV-2; the Company's development of a new, strain-specific booster candidate (mRNA-1273.351) against SARS-CoV-2; the speed and flexibility with which the Company's mRNA technology can develop vaccines against new strains of the coronavirus; and the necessity of additional booster doses to address waning immunity to, and new variants of, the coronavirus. In some cases, forward-looking statements can be identified by terminology such as "will," "may," "should," "could," "expects," "intends," "plans," "aims," "anticipates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this presentation are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond Moderna's control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties, and other factors include, among others: the fact that there has never been a commercial product utilizing mRNA technology approved for use; the fact that the rapid response technology in use by Moderna is still being developed and implemented; the safety, tolerability and efficacy profile of the Moderna COVID-19 Vaccine observed to date may change adversely in ongoing analyses of trial data or subsequent to commercialization; despite having ongoing interactions with the FDA or other regulatory agencies, the FDA or such other regulatory agencies may not agree with the Company's regulatory approval strategies, components of our filings, such as clinical trial designs, conduct and methodologies, or the sufficiency of data submitted; Moderna may encounter delays in meeting manufacturing or supply timelines or disruptions in its distribution plans for the Moderna COVID-19 Vaccine; whether and when any biologics license applications and/or additional emergency use authorization applications may be filed in various jurisdictions and ultimately approved by regulatory authorities; potential adverse impacts due to the global COVID-19 pandemic such as delays in regulatory review, manufacturing and clinical trials, supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy; and those other risks and uncertainties described under the heading "Risk Factors" in Moderna's most recent Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission (SEC) and in subsequent filings made by Moderna with the SEC, which are available on the SEC's website at www.sec.gov. Except as required by law, Moderna disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this presentation in the event of new information, future developments or otherwise. These forward-looking statements are based on Moderna's current expectations and speak only as of the date hereof.

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Moderna COVID-19 Vaccine: Indication & Safety Information

Authorized Use in the United States:

The Moderna COVID-19 Vaccine is authorized for use under an Emergency Use Authorization (EUA) from the U.S. Food and Drug Administration (FDA) for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 18 years of age and older.

Important Safety Information:

- Do not administer the Moderna COVID-19 Vaccine to individuals with a known history of severe allergic reaction (e.g., anaphylaxis) to any component of the Moderna COVID-19 Vaccine.
- Appropriate medical treatment to manage immediate allergic reactions must be immediately available in the event an acute anaphylactic reaction occurs following administration of the Moderna COVID-19 Vaccine. Monitor Moderna COVID-19 Vaccine recipients for the occurrence of immediate adverse reactions according to the Centers for Disease Control and Prevention guidelines (https://www.cdc.gov/vaccines/covid-19/).
- Immunocompromised persons, including individuals receiving immunosuppressive therapy, may have a diminished response to the Moderna COVID-19 Vaccine.
- The Moderna COVID-19 Vaccine may not protect all vaccine recipients.
- Adverse reactions reported in a clinical trial following administration of the Moderna COVID-19 Vaccine include pain at the injection site, fatigue, headache, myalgia, arthralgia, chills, nausea/vomiting, axillary swelling/tenderness, fever, swelling at the injection site, and erythema at the injection site.
- Available data on Moderna COVID-19 Vaccine administered to pregnant women are insufficient to inform vaccine-associated risks in pregnancy. Data are not available to assess the effects of Moderna COVID-19 Vaccine on the breastfed infant or on milk production/excretion.
- There are no data available on the interchangeability of the Moderna COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of Moderna COVID-19 Vaccine should receive a second dose of Moderna COVID-19 Vaccine to complete the vaccination series.
- Additional adverse reactions, some of which may be serious, may become apparent with more widespread use of the Moderna COVID-19 Vaccine.
- Vaccination providers must complete and submit reports to VAERS online at https://vaers.hhs.gov/reportevent.html. For further assistance with reporting to VAERS, call 1-800-822-7967. The reports should include the words " Moderna COVID- 19 Vaccine EUA " in the description section of the report.

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Moderna COVID-19 Vaccine retains neutralizing activity against emerging variants first identified in the U.K. and the Republic of South Africa

- **Vaccination with the Moderna COVID-19 Vaccine produces neutralizing titers against all key emerging strains tested, including B.1.1.7 (first identified in the U.K.) and B.1.351 (first identified in the Republic of South Africa)**
  - No significant impact on neutralizing titers against the B.1.1.7 variant relative to prior variants
  - A six-fold reduction in neutralizing titers was observed with the B.1.351 variant relative to prior variants. Despite this reduction, neutralizing titer levels with B.1.351 remain above levels that are expected to be protective
- **We also announced our clinical strategy to proactively address the pandemic as the virus continues to evolve**

Update on Spike variants

Variant Name	Amino Acid Changes in Spike
20A.EU1	A222V-D614G
20A.EU2	S477N-D614G
Mink Cluster 5 Variant	ΔH69ΔV70-Y453F-D614G-I692V-M1229I
B.1.1.7 (a.k.a., 20B/501Y.V1, VOC 202012/01, “UK Variant”)	ΔH69ΔV70-ΔY144-N501Y-A570D-D614G-P681H-T716I-S982A-D1118H
B.1.351 (a.k.a., 20C/501Y.V2, “SA Variant”)	L18F-D80A-D215G-ΔL242ΔA243ΔL244-R246I-K417N-E484K-N501Y-D614G-A701V
P.1 (a.k.a., “Brazil Variant” = “Japan variant”)	L18F-T20N-P26S-D138Y-R190S-K417T-E484K-N501Y-D614G-H655Y-T1027I
CAL.20C (a.k.a., “California variant”)	S13I, W152C, L452R, D614G

In vitro data available

- Sera from eight Phase 1 clinical trial participants (aged 18-55 years) who received two 100 µg doses of mRNA-1273
- Non-human primates (NHPs) immunized with two doses of 30 µg or 100 µg of mRNA-1273

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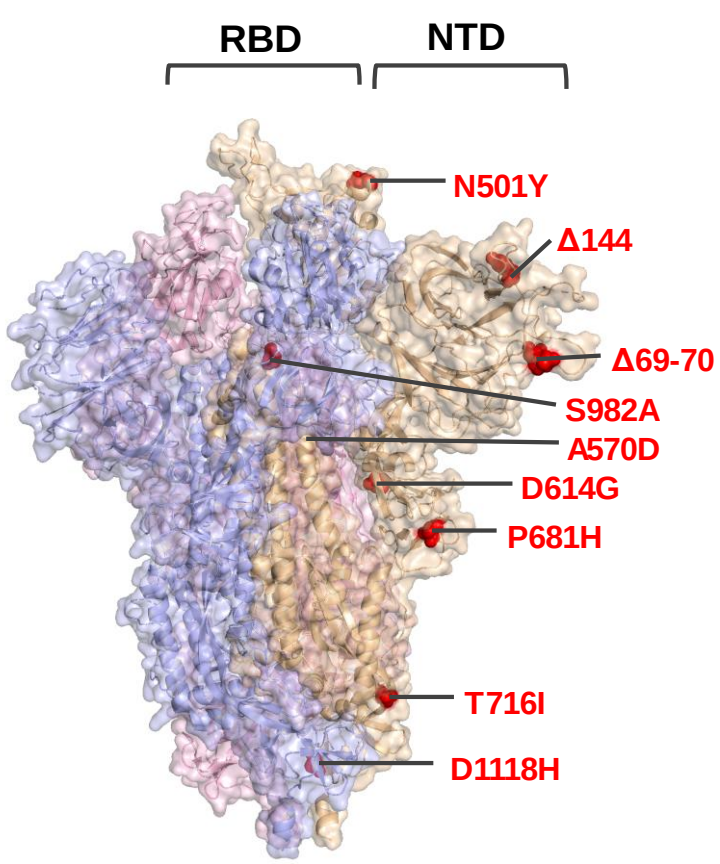
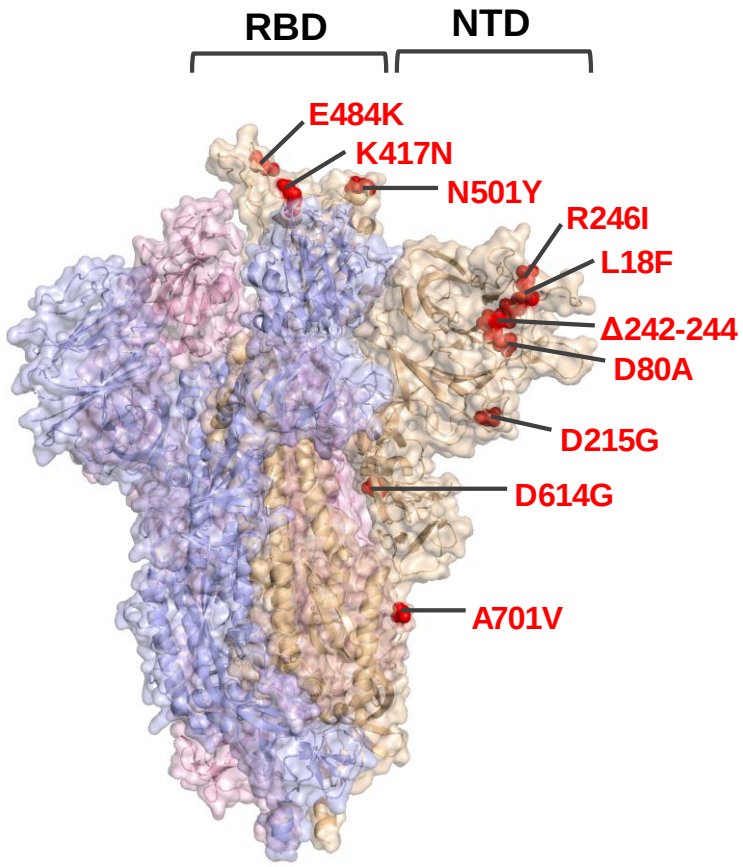
3D models of B.1.1.7, B.1.351 and P.1 strains

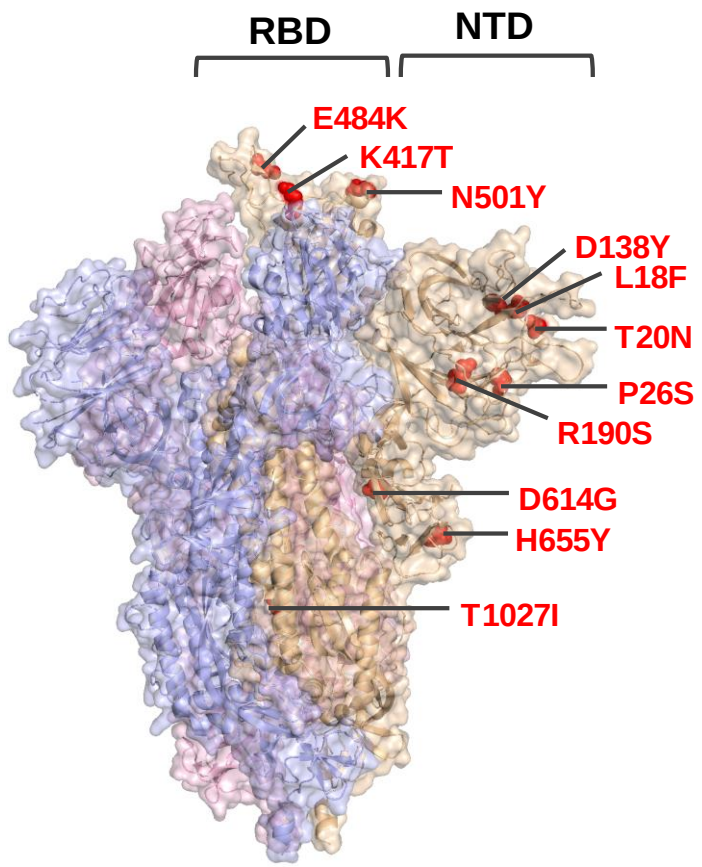
RBD: Receptor binding domain
NTD: N-terminal domain



B.1.1.7



B.1.351



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Unknown resistance profile

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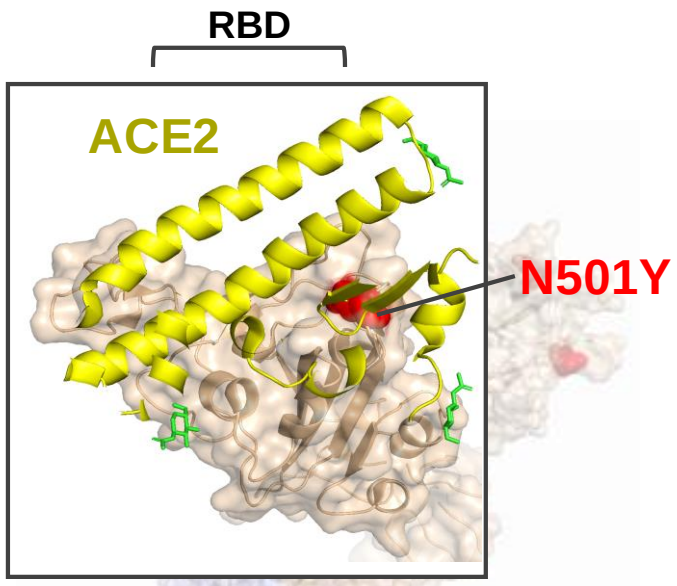
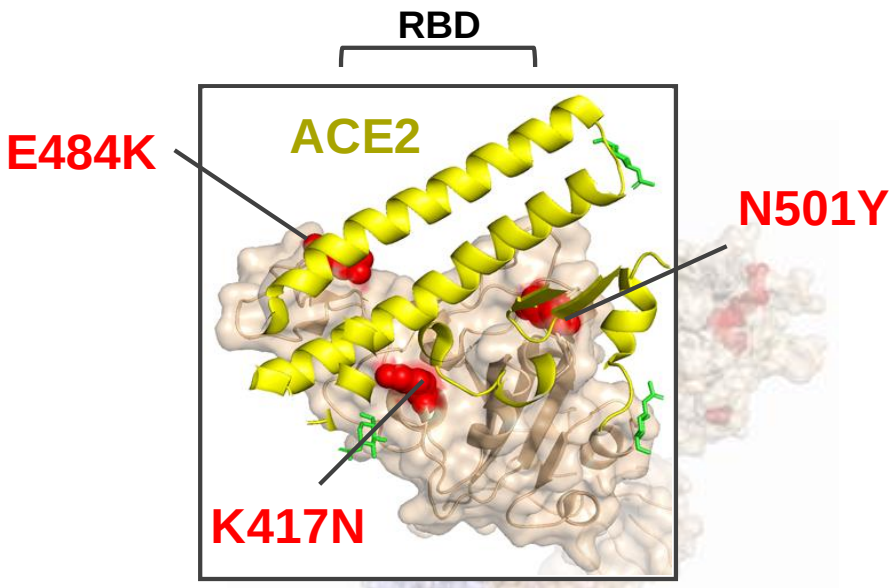
3D models of B.1.1.7, B.1.351 and P.1 strains: Receptor binding domain

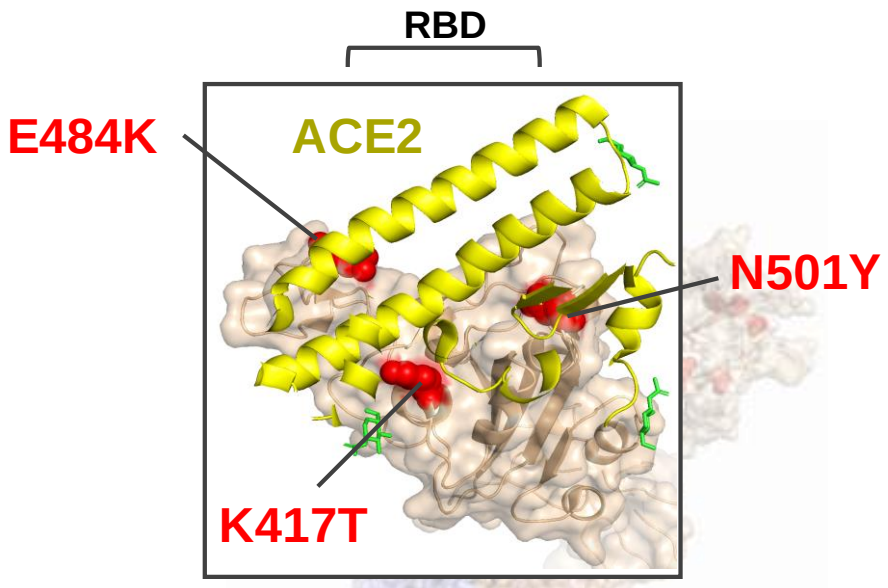
RBD: Receptor binding domain



B.1.1.7



B.1.351



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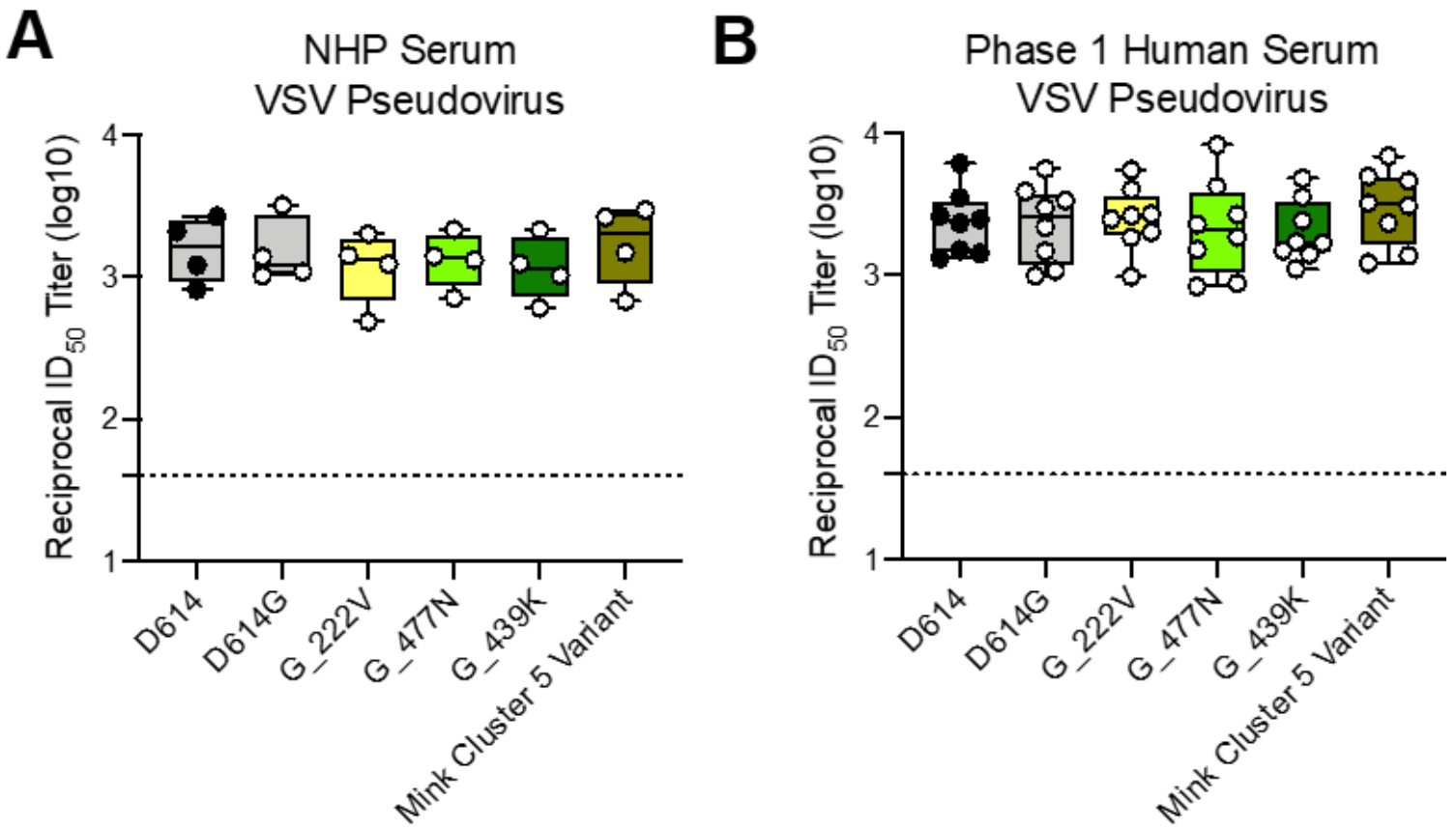
mRNA-1273 elicits similar neutralizing antibody titers against various SARS COV-2 Spike variants



- Results demonstrate that the antibody response elicited by mRNA-1273 provides similar levels of neutralization against these SARS-CoV-2 S variants as against the Wuhan-Hu-1 (D614) strain

(A) Rhesus macaques (NHPs) were immunized with 30 µg mRNA-1273 on a prime-boost schedule, and sera were collected 4 weeks post boost. (B) Phase 1 trial participants were immunized with 100 µg mRNA-1273 on a prime-boost schedule, and sera were collected 1 week post-boost. Neutralization was measured by a recombinant VSV-based SARS-CoV-2 pseudovirus neutralization assay incorporating full-length spike protein of the Wuhan isolate (D614) or the indicated spike variants (D614G, A222V-D614G, S477N-D614G, N439K-D614G, mink cluster 5 variant). Min to max box plots, with the box from 25-75% and the mean value denoted by the line. The horizonal dotted lines indicate the lower limit of quantification (LLOQ=40). G=D614G.

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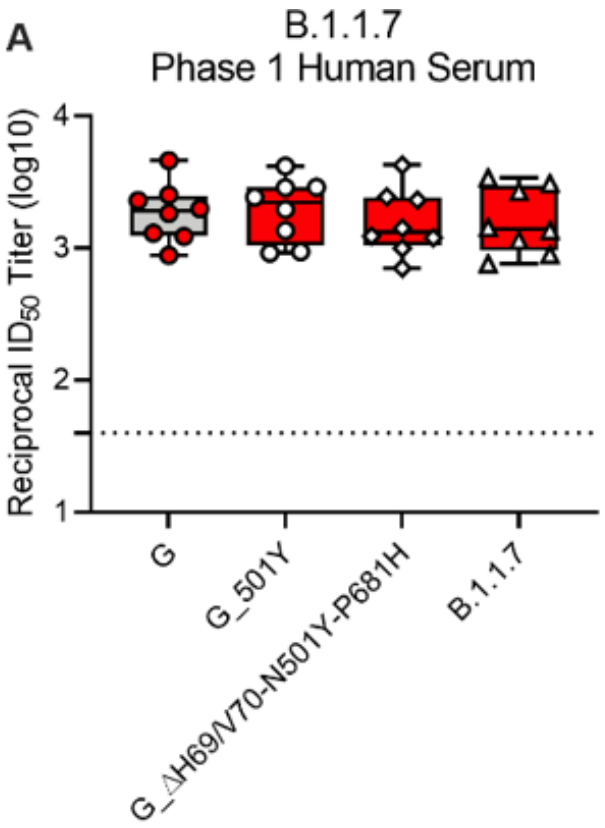
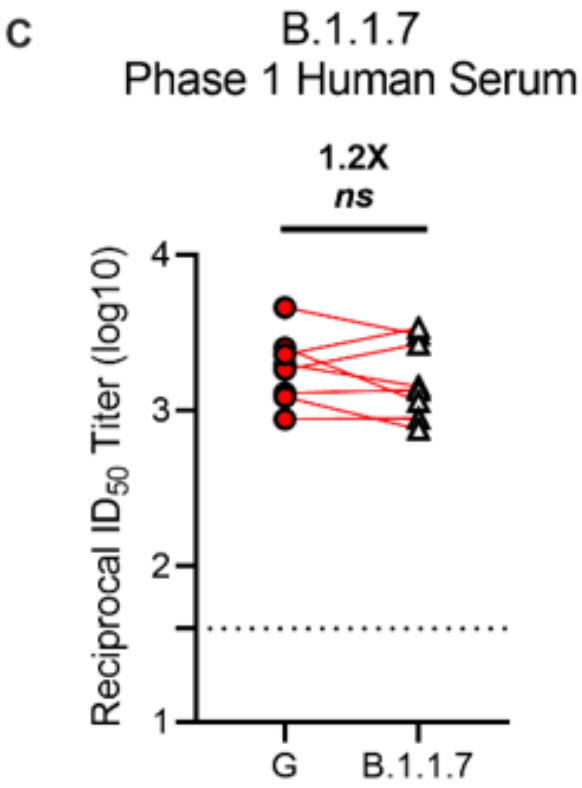
Human sera from participants vaccinated with mRNA-1273 continue to show neutralization of B.1.1.7 strain





- Neutralizing antibody titers remained high and were generally consistent with neutralizing titers relative to prior variants
- No significant impact on neutralization was observed from either the full set of mutations found in the B.1.1.7 variant or from specific key mutations of concern

mRNA-1273 human sera neutralization against B.1.1.7. mRNA-1273 Phase 1 trial participant sera were collected on day 36, 7 days after the boosting dose. Neutralization was measured by a recombinant VSV-based PsVN assay that incorporated D614G (G) or the indicated spike mutations present in the B.1.1.7 variant (**A, C**). Results from individual participant sera is represented as dots on each figure, with lines connecting the D614G and variant neutralization titers (**C**). The horizonal dotted lines indicate the lower limit of quantification (LLOQ). D = D614 Wuhan-Hu-1 isolate, G = D614G variant

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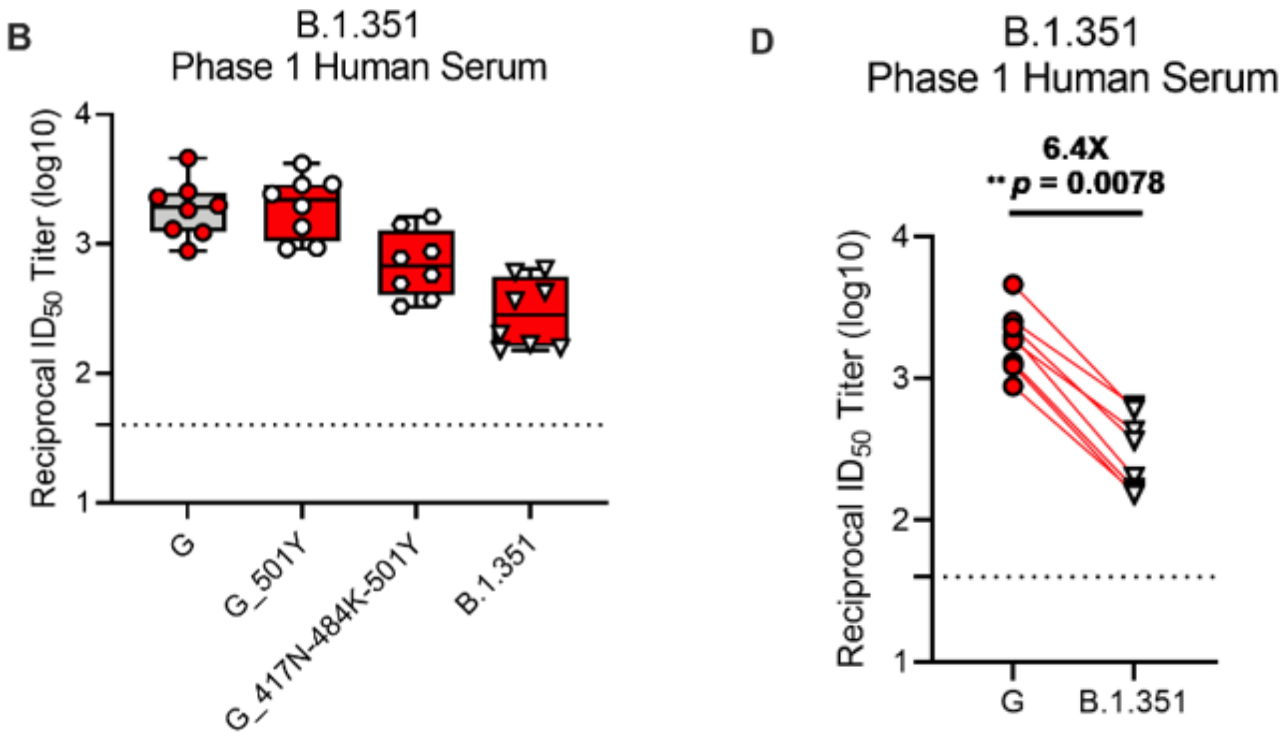
Phase 1 human sera from mRNA-1273 vaccinated individuals show lower neutralizing antibody titers but continue to stop replication of the B.1.351 variant



- Vaccination with the Moderna COVID-19 Vaccine produces neutralizing antibody titers that remain above the neutralizing titers that were shown to protect NHPs against wildtype viral challenge
- Pseudovirus neutralizing antibody titers were approximately 6-fold lower relative to prior variants
- These lower titers may suggest a potential risk of earlier waning of immunity to the new B.1.351 strains

mRNA-1273 human sera neutralization against B.1.351. mRNA-1273 Phase 1 trial participant sera were collected on day 36, 7 days after the boosting dose. Neutralization was measured by a recombinant VSV-based PsVN assay that incorporated D614G (G) or the indicated spike mutations present in the B.1.351 variant (**B, D**). Results from individual participant sera is represented as dots on each figure, with lines connecting the D614G and variant neutralization titers (**D**). The horizonal dotted lines indicate the lower limit of quantification (LLOQ). D = D614 Wuhan-Hu-1 isolate, G = D614G variant

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Two-dose regimen of the Moderna COVID-19 Vaccine at the 100 µg dose is expected to be protective against emerging strains detected to date

Proactive clinical development strategy against evolving virus

- Testing an additional booster dose of Moderna's COVID-19 Vaccine (mRNA-1273) to further increase neutralizing titers against emerging strains beyond the existing primary and booster protocol

- Advancing an emerging strain booster candidate (mRNA-1273.351) against the variant first identified in the Republic of South Africa, to determine if this new booster candidate will be more effective to boost titers against this and potentially future strains

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Our mission

To deliver on the promise of mRNA science to create a new generation of transformative medicines for patients.

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