NOVAVAX
Creating Tomorrow's Vaccines Today

NVX-CoV2373 Vaccine for COVID 19

NAIIS

12 May 2020

1

Executive summary

- Novavax has a prefusion, stable and highly immunogenic recombinant SARS-CoV-2 Spike protein nanoparticle vaccine candidate (NVX-CoV2373)
- Novavax is employing a mature vaccine platform to address the current COVID 19 pandemic
- NVX-CoV2373 can be scaled up to deliver 100M doses by year end and > 1 billion doses in 2021
- NVX-CoV2373 could potentially be deployed by the end of 2020
- Funded by CEPI

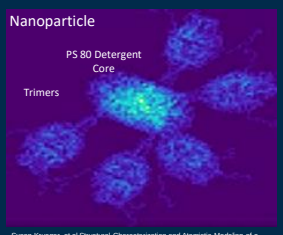
2

Recombinant Protein Nanoparticles

Platform technology: previous experience allows directional confidence in early development

Engineered for immunogenicity, stability and productivity

SARS-CoV-2 Spike protein structure critical for protection, characterization tools well developed

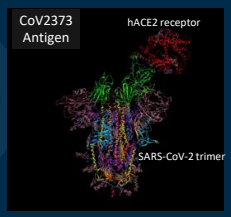


Susan Krueger, et al Structural Characterization and Atomistic Modeling of a Respiratory Syncytial Virus Fusion Glycoprotein Nanoparticle Vaccine, ACS Nano

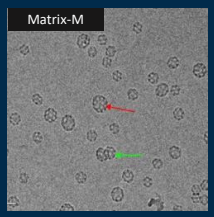
3

NVX-CoV2373 and Matrix-M™

Critical partners for immunogenicity



Novavax, Inc. (U.S.)

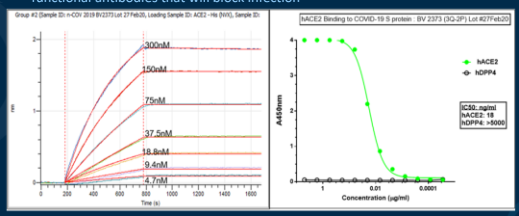


Novavax AB (Sweden)

4

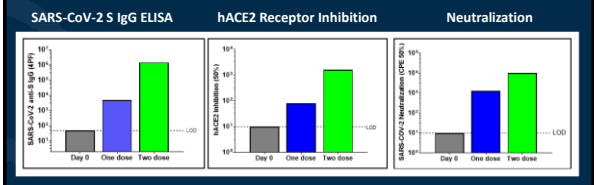
NVX-CoV2373 binds with high affinity to hACE2 receptor

Binding is an indication of the correct prefusion structure, predicts induction of functional antibodies that will block infection



5

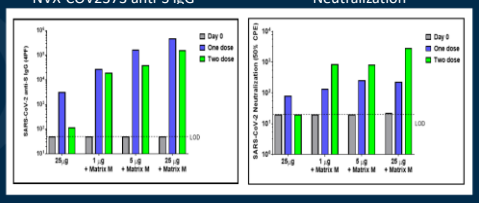
NVX-COV2373 vaccine + Matrix-M™
anti-S IgG, hACE2 receptor inhibition, SARS-CoV-2 neutralization



6

NVX-COV2373+Matrix-M Baboons
Anti-S IgG, hACE2 receptor inhibition, and Neutralization

NVX-COV2373 anti-S IgG



Neutralization*

*Matt Frieman, UMD School of Medicine BSL3 SARS-CoV-2 virus infection Vero E6 cell CPE (50%) assay.

7

NVX-CoV2373 phase 1 clinical trial
With or without 50 mg Matrix-M™ adjuvant

- Single protocol Phase 1/Phase 2
- Phase 1 – 130 subjects, 18-59 years of age
  - ELISA, Receptor Binding Inhibition
  - Neutralization, CMI – Th1/Th2
- Phase 2 to follow closely on day 35 Phase 1 results
- ~2200 Subjects, 1000 > Older Adults
- Additional dose finding
- COVID-19 disease endpoints – PCR confirmed
- Trigger for Phase 3 (or potential EUA)
- Other parallel trials in other geographies and populations

Treatment Group	Day 0		Day 21	
		Matrix-M Adjuvant		Matrix-M Adjuvant
A	0	--	0	--
B	25 µg	--	25 µg	--
C	5 µg	50 µg	5 µg	50 µg
D	25 µg	50 µg	25 µg	50 µg
E	25 µg	50 µg	0	--

8