WHO Briefing: Boosting with Matrix M Adjuvanted Recombinant Spike Nanoparticle Vaccine, NVX-CoV2373

Gregory Glenn
August 13, 2021
Phase 2 Study design and status
Day 189 boost with 2373 (homologous) vaccine, immune responses at Day 217

USA & Australia — N=1,288  |  Adults aged 18-84 years (n=583; 60-84 years)

Day 0
- Placebo n=255
  - 5 µg + Matrix-M n=258
    - 5 µg + Matrix-M
      - 5 µg + Matrix-M
      - Placebo
      - 5ug + Matrix-M
      - Placebo

Day 21
- Placebo
  - 5 µg + Matrix-M
    - 5 µg + Matrix-M
      - Placebo
      - 5ug + Matrix-M
      - Placebo

Day 189
- Placebo
  - Placebo
  - Placebo
  - Placebo
  - Placebo

Additional boosting planned on Day 357
Adverse event rates comparable with low rates of severe and serious adverse events
Day 217 Safety Summary (5µg/5µg/5µg arm, all ages)

Source: Table 14.3.1.1.1

1 Discontinued from study
Increased Wild Type neutralization responses

Vaccination on Day 0 & 21 and boost on Day 189

WT neutralization titers increased ~4.3-fold compared to peak response seen after primary vaccination series.
Boosted microneutralization responses greater than observed in Phase 3 studies

- **UK Phase 3 Efficacy**
  - Prototype: 96%
  - B.1.1.7: 86%

- **US Phase 3 Efficacy**
  - Non-VoI/VoC: 100%
  - B.1.1.7: 94%

- **6 Month Boost**
  - 4.6-5.5x

* Mild, Moderate or Severe Disease

Wild Type Virus Neutralization (Log10)

- **UK Ph3 Day 35**
- **PREVENT-19 Day 35**
- **US/AU Ph2 Day 217**

Microneutralization Responses with 95% CI
Peak primary vaccination responses increased 6.6-10.8 for key variants after a single booster dose of NVX-CoV2373

ACE 2 Receptor Binding Inhibition by Antibodies:
Stringent Functional antibody assessment, correlates with MN

Assays performed by Novavax Discovery
NVX-CoV2373 Clinical Summary

• A single dose of NVX-CoV2373 at 6 months significantly boosts immune responses:
  • Wild-type Neutralization and Anti-Spike IgG levels up 4.3 to 4.6-fold over peak primary vaccination response
  • Functional hACE-2 immune response detected against alpha, beta and delta
    • Delta with 6.6-fold boost from peak
    • Beta with 10.8-fold boost from peak
    • Alpha with 8.8-fold boost from peak

• These data support the use of our vaccine in a boosting campaign