POP Biotechnologies' SNAP Vaccine System Safe and Effective in a Phase II Clinical Trial for COVID-19

POP Biotechnologies (POP BIO), a biopharmaceutical startup, announces the publication of an interim analysis of the Phase 2 clinical trial of EuCorVac-19.

EuCorVac-19, a novel COVID-19 vaccine currently in Phase 3 clinical trials.

BUFFALO, NY, UNITED STATES, November 30, 2022 / EINPresswire.com/ -- POP Biotechnologies (POP BIO), a Buffalo, New York-based biopharmaceutical startup, announces the publication of an interim analysis of the Phase 2 clinical trial of EuCorVac-19, a recombinant protein vaccine displaying the SARS-CoV-2 receptor-binding domain (RBD) antigen on the immunogenic liposomes. Data from this clinical study has been published today in BMC Medicine (https://doi.org/10.1186/s12916-022-02661-1).

EuCorVac-19 is a RBD-based vaccine consisting of POP BIO's Spontaneous Nanoliposome Antigen Particle (SNAP) technology in combination with the adjuvant genetically modified E. coli Monophosphoryl Lipid A (EcML), produced by EuCorVac-19 manufacturer Eubiologics (KOSDAQ: 206650). Use of SNAP technology enables co-delivery, as opposed to co-administration, of antigen with adjuvant, packed in an immunogenic nanoparticle format free of any carrier protein.

In this Phase II clinical study, 229 participants were enrolled at five clinical sites in South Korea. Healthy adults aged 19-75 without prior exposure to COVID-19 were dosed on day 0 and day 21 between July and October 2021. The most common local adverse events were low-grade injection site tenderness and pain, while the most common systemic adverse events were low-grade fatigue, myalgia, and headache. No clinical abnormalities were detected, and no serious adverse effects were solicited by EuCorVac-19. Adverse events did not increase with the second dosing. On day 42, Spike IgG geometric mean ELISA titers were 0.8, 211, and 590 Spike binding

antibody units (BAU/mL) for placebo, low-dose, and high-dose EuCorVac-19, respectively ($p < 0.001$ between groups). No anti-his-tag antibodies were detected. Neutralizing antibody levels of the low-dose and high-dose EuCorVac-19 groups had FRNT50 geometric mean values of 129 and 316, respectively. Boosting responses and dose responses were observed. Antibodies against the RBD correlated with antibodies against the Spike and with virus neutralization.

The published data shows that in this trial,EuCorVac-19 was well-tolerated and induced antibodies in a dose-dependent manner that neutralizes SARS-CoV-2. The unique liposome display approach of EuCorVac-19, which lacks any immunogenic protein components besides the antigen itself, coupled with the lack of increased adverse events during boosting suggests the vaccine platform is amenable to multiple boosting regimes in the future to help control the ongoing COVID-19 pandemic.

"The results of this Phase II trial provide critical evidence of the value of the SNAP platform. This data provides invaluable support towards our platform's development, further enabling the creation of new vaccines with the potential to alleviate suffering worldwide," says POP BIO co-founder Jonathan Smyth.

"The unique qualities of the SNAP adjuvant system enabled simple conversion of protein antigens into immunogenic particles that safely induced virus-neutralizing antibodies. We look forward to further study of this technology for the prevention of COVID-19 and other diseases." says company co-founder and study co-author Jonathan Lovell.

Presently, EuCorVac-19 is undergoing two Phase III clinical studies in simultaneous studies in the Philippines and the Democratic Republic of Congo. EuBiologics is working with international research organizations to expedite recruitment and analyze trial results to accelerate regulatory approval of EuCorVac-19.

POP BIO is developing new vaccine product candidates and is seeking further collaborators around the SNAP technology to make use of the unique qualities of the vaccine platform technology.

POP Biotechnologies (POP BIO): POP BIO is a privately held biotechnology company focused on the research and development of novel therapeutics and vaccines employing their proprietary porphyrin-phospholipid (PoP) liposome technologies. The PoP technology, exclusively licensed from The State University of New York Research Foundation (SUNY-RF), was developed by company founder Dr. Jonathan Lovell at his academic facilities at The State University of New York at Buffalo (SUNY Buffalo).

POP BIO's SNAP Technology: POP BIO's Spontaneous Nanoliposome Antigen Particleization (SNAP) technology enables the rapid development and manufacturing of immunogenic particle-based vaccines and immunotherapies directed against infectious diseases and other diseases through the use of cobalt-modified variant of the PoP technology (CoPoP). The SNAP technology

enables the seamless generation of stable particle formation and liposome-display of protein and peptide antigens, resulting in substantial improvements in antigen-specific immune responses.

About EuBiologics: EuBiologics is a South Korean biotechnology company that is advancing the EuCorVac-19 COVID-19 vaccine and other vaccine products. EuBiologics has two main animal-based bioreactors (1,000L) to produce recombinant protein antigens and EcML. The total capacity of COVID-19 vaccine is in the hundreds of millions of doses per year.

About EuBiologics' EuIMT Technology: EuBiologics' Immune Modulation Technology uses genetically engineered Monophosphoryl Lipid A (MLA), termed EcML, a unique TLR4 agonist. EuBiologics has IP protection around EcML and various adjuvant systems. Eubiologics' EcML and POP BIO's SNAP technologies synergize to create potent next-generation vaccines.

Jonathan R Smyth
POP Biotechnologies, Inc.
jrsmyth@popbiotech.com
+1 315-220-0087
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