

First COVID-19 vaccine developed in the Southern Hemisphere commences human trials

Vaxine's COVAX-19® vaccine becomes the first SARS-CoV-2 (COVID-19) vaccine developed in the Southern Hemisphere to enter human trials.

ADELAIDE, SOUTH AUSTRALIA, AUSTRALIA, July 1, 2020 /EINPresswire.com/ -- Australian company, Vaxine Pty Ltd, a clinical stage biopharmaceutical company that specializes in adjuvant platform technology, is behind COVAX-19®, the first SARS-CoV-2 (COVID-19) vaccine



Vaxine's promising new COVID-19 vaccine candidate

developed in the Southern Hemisphere to enter human trials.

The Phase 1 trial will provide initial safety and immune response data on COVAX-19® vaccine and is being conducted by the PARC clinical trial unit at the Royal Adelaide Hospital and will involve

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COVAX-19 is set to become the best in class recombinant protein vaccine against COVID-19" Arnaud Mallevre, Innovation Scale-up Manager 40 healthy participants aged between 18 and 65 years who have already been pre-screened. Participants with receive 2 doses, 3 weeks apart, of COVAX-19® vaccine or a placebo injection and will then have blood tests to measure protective antibody and T cell responses induced by the vaccine.

"As early as January 2020 our modelling data identified that COVID-19 was a major pandemic threat that could

potentially cause millions of deaths globally," said Professor Nikolai Petrovsky, Chairman and Research Director of Vaxine. "Unfortunately our early predictions were spot on."

"Although international bodies resisted our early calls to call it a pandemic and downplayed the imminent threat, Vaxine immediately went into overdrive to develop a vaccine against the impending COVID-19 pandemic," he explained.

"Vaxine might be a small company but over the last 18 years we have learned to be extremely resourceful in our battles against some of the world's biggest threats including SARS, swine flu, bird flu and Ebola - designing pandemic vaccines that were effective in animal studies, as well as having some enter human clinical trials. We consequently saw it as a public health imperative to use our pandemic vaccine expertise rapidly develop a vaccine solution to COVID-19", explained Prof. Petrovsky .

By February, Vaxine had already rapidly developed a variety of different COVID-19 vaccines, including DNA, mRNA and recombinant protein versions, but quickly concluded that the recombinant spike protein approach, which mirrored Vaxine's earlier SARS coronavirus vaccine approach, provided the most certain and reliable results when combined with Vaxine's unique non-inflammatory Advax-CpG55.2 adjuvant.

"Past experience with adenovirus-based vaccines has shown disappointing protection and high toxicity and DNA and mRNA type vaccines have their own problems, including being unproven technologies that may still turn out to be poorly scalable or have unexpected side effects. Low immunogenicity of adenovirus, DNA and mRNA technologies in particular could be a major problem when it comes to coronavirus vaccines, where immunity will need to be strong and long-lasting" explained Prof. Petrovsky.

"Unfortunately most of these vaccine technologies are unable to benefit from adjuvants, which are the key turbochargers that are bolted onto protein-based vaccines to dramatically enhance their effectiveness"

"This, along with exceptional safety, tolerability, manufacturing scalability and a proven regulatory pathway, is why Vaxine chose to go with a recombinant spike protein approach for COVAX-19® vaccine", he explains.

Vaxine has a long history of world firsts; in 2009 it had a new swine flu vaccine in human trials within 3 months of discovery of the virus, In 2019, it had the first vaccine technology developed using artificial intelligence (AI) enter human trials. Vaxine's embrace of new technologies including its use of artificial intelligence for vaccine design enables it to develop pandemic vaccines more efficiently and faster.

"Vaxine is a virtual global open-source vaccine development company", Prof Petrovsky said. "This explains how we are able to consistently deliver major breakthroughs despite its modest size with a core team of just 14 people. Vaxine was an early leader in seeing that the future lies in virtual global vaccine companies that can connect and draw expertise from around the world, rather than being fixed in one spot and having to make a major investment in bricks and mortar "

Support for Vaxine's adjuvant platform has come from the National Institute of Allergy and

Infectious Diseases, part of the US National Institutes of Health. Development and discovery of the critical Advax-CpG55.2 adjuvant platform that forms a basis of COVAX-19® vaccine was funded in whole or in part with Federal funds under NIAID Contracts HHSN272200800039C, HHSN272201400053C, and HHSN27221800024C.

Prof Petrovsky explains long-term financial support is required to build a robust pandemic vaccine platform and advance it into human trials. "Between pandemics, pandemic vaccine development, despite its paramount public health importance, is always going to be the poor brother to other areas of research"

"Pandemic research is not something you can turn on and off like a tap. People should not think that short-term funds no matter how large can deliver instant pandemic solutions after a crisis hits, it will always be too little, too late. Only long-term support can build solid pandemic vaccine platforms like Vaxine's", explains Sharen Pringle, Vaxine's Business Manager.

"This was not an overnight success with 18 years of hard development work going into the pandemic vaccine platform that delivered COVAX-19®," she explains.

"We would not have achieved this key milestone in development of COVAX-19® without support from many key partners, who will all be acknowledged through Vaxine's website", she said

A press event for the commencement of the COVID-19 vaccine clinical trial will be held at 1.30pm on Thursday 2 July 2020, at PARC Clinical Research, Level 4G.1 East, Royal Adelaide Hospital, Port Road, Adelaide, South Australia, Australia 5000 with the opportunity to visit and film in Vaxine's laboratories at Flinders University campus during the morning of Thursday 2 July 2020.

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