

Vaccine by S'pore scientists may be available early next year

Arcturus, Duke-NUS see positive results from early-stage trials here

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\$61m

The amount that Singapore's Economic Development Board (EDB) is pumping into the manufacture of the vaccine. This will be used for the purchase of equipment, materials and services related to the vaccine's manufacture.

\$236m

The EDB would have the right to purchase vaccine worth up to this amount at pre-negotiated prices, with shipments expected to begin in the first quarter of next year.

Singapore could have a Covid-19 vaccine by early next year.

The first shipments of a vaccine co-developed by Singapore researchers are expected in the first quarter, said Arcturus Therapeutics – the American pharmaceutical company working with Duke-NUS Medical School scientists on the vaccine – yesterday, as it announced positive preliminary results from the early-stage clinical trials being conducted in Singapore.

The Economic Development Board (EDB) is pumping in some US\$45 million (S\$61 million) into the manufacture of the vaccine, which will be used for the purchase of equipment, materials and services related to the vaccine's manufacture, said Arcturus.

The EDB will also have the right to purchase up to US\$175 million

(S\$236 million) worth of the vaccine at pre-negotiated prices, with shipments expected to begin in the first quarter of next year, the firm added in a statement.

Duke-NUS Medical School's Professor Ooi Eng Eong, who co-developed the vaccine with Arcturus, said the results so far were promising and showed that the vaccine could be effective as a single dose.

"This differentiates this investigational vaccine from many other Covid-19 vaccines in development," said Prof Ooi, who is also a member of Arcturus' Vaccine Platform Scientific Advisory Board.

"The vaccine has the potential to provide important public health benefits by greatly facilitating broad administration across multiple populations worldwide."

Some 106 volunteers were enrolled in the early-stage trials in Singapore, of whom 28 received placebos. The rest received either one or two doses.

During early-stage trials, mainly carried out among smaller groups

of up to hundreds of volunteers, researchers look out for dangerous side effects and analyse patient samples to see how the human immune system responds to the vaccine.

They also seek to determine how many doses are needed to incite the desired immune response.

Preliminary findings for the vac-

cine, dubbed Lunar-Cov19, indicate positive responses in both safety and immune response.

Arcturus said no subjects have withdrawn from the study and there have been no serious adverse events deemed to be treatment-related.

As for the immune response, both antibody and T-cell response

has been observed in volunteers.

Arcturus said it is in discussions with the Health Sciences Authority to advance into later-stage clinical studies.

The Straits Times had earlier reported that phase three clinical trials could start before the end of this year.

Such trials are much larger in

scope than earlier ones, usually involving thousands to tens of thousands of people. These are often held across multiple jurisdictions or countries, and aim to see if the vaccine can confer protection from infection.

The encouraging preliminary findings for the Singapore co-developed vaccine come as the vac-

cine development race heats up.

On Monday, Pfizer and BioNTech announced that their experimental vaccine is 90 per cent effective at preventing Covid-19 in ongoing phase three trials. They are awaiting data on safety, which could come later this month.

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Researchers at an Arcturus Therapeutics laboratory in San Diego, California. The American pharmaceutical firm is working with Duke-NUS Medical School in Singapore on a potential Covid-19 vaccine. Preliminary findings for the vaccine, dubbed Lunar-Cov19, indicate positive responses in both safety and human immune response, said Arcturus. The vaccine could be effective as a single dose. PHOTO: REUTERS