5 COVID-19 antibodies discovered by Singapore team, human trials slated in coming months

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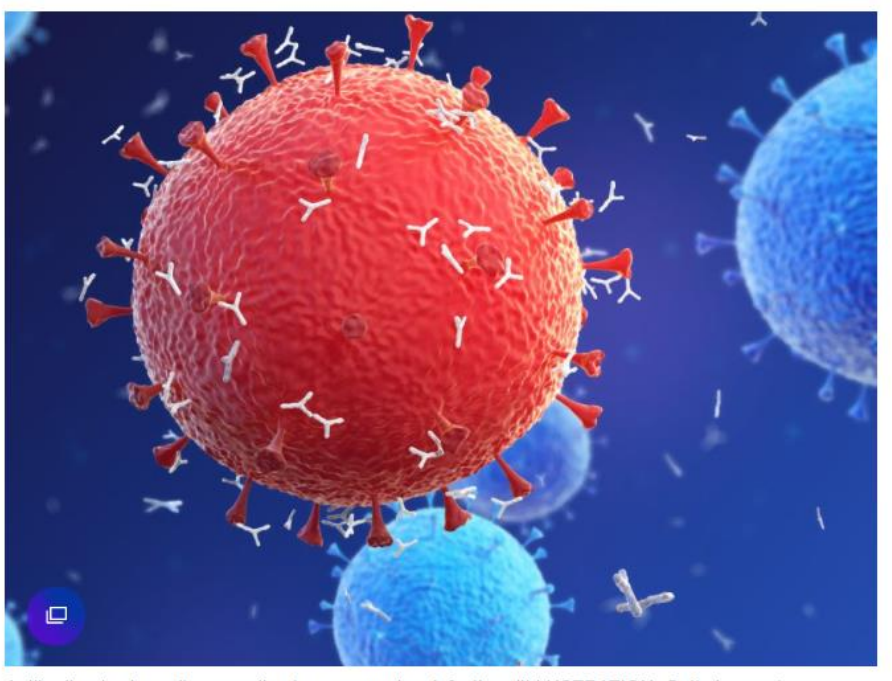


Antibodies (y-shaped) responding to a coronavirus infection. (ILLUSTRATION: Getty Images)

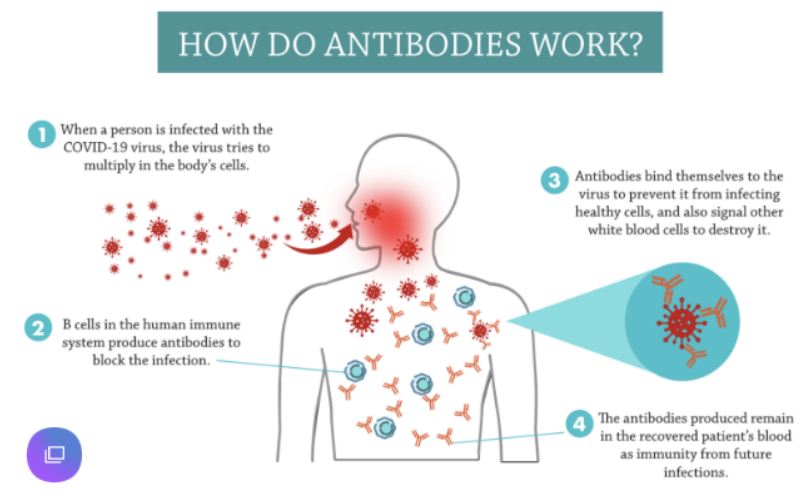
SINGAPORE — Five antibodies which could potentially neutralise the novel coronavirus behind COVID-19 have been discovered by a team of scientists in Singapore.

The scientists from the DSO National Laboratories (DSO) have been testing these antibodies in the laboratory, with results showing that they are all potent in blocking infection and effective against key mutations that have emerged in the virus during the pandemic, according to a press release issued by the laboratory on Wednesday (17 June).

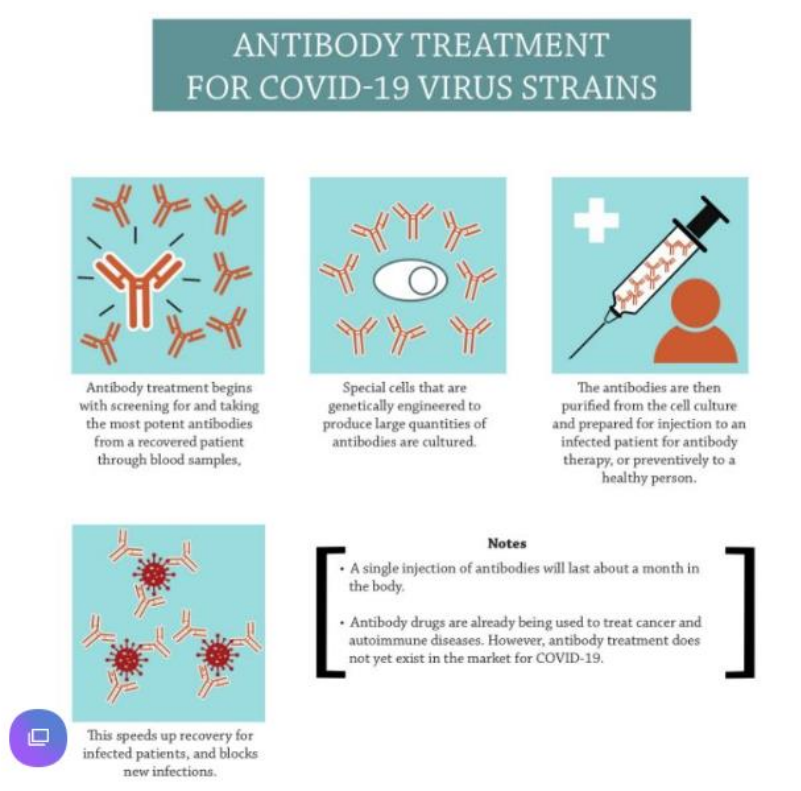
All five antibodies were isolated from blood samples of recovered COVID-19 patients, provided by the National Centre for Infectious Diseases and the Singapore General Hospital.

Dr Conrad Chan, principal research scientist and laboratory director (applied molecular technology) at DSO, said, "Administration of an antibody obtained from a recovered individual transfers that person's immunity to the recipient, enabling any patient to better fight the infection and recover faster."

He added that as antibodies remain in the system for close to a month, they can also be used to prevent infection.



(INFOGRAPHIC: DSO)



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After screening hundreds of thousands of B cells, which are a type of white blood cell of the lymphocyte subtype, the DSO isolated the first two antibodies for testing within a month of receiving blood samples from the hospitals.

These B cells were screened simultaneously with live virus using the DSO's proprietary screening technique developed in collaboration with the National University of Singapore's Yong Loo Lin School of Medicine and Life Sciences Institute over the last five years, said the laboratory.

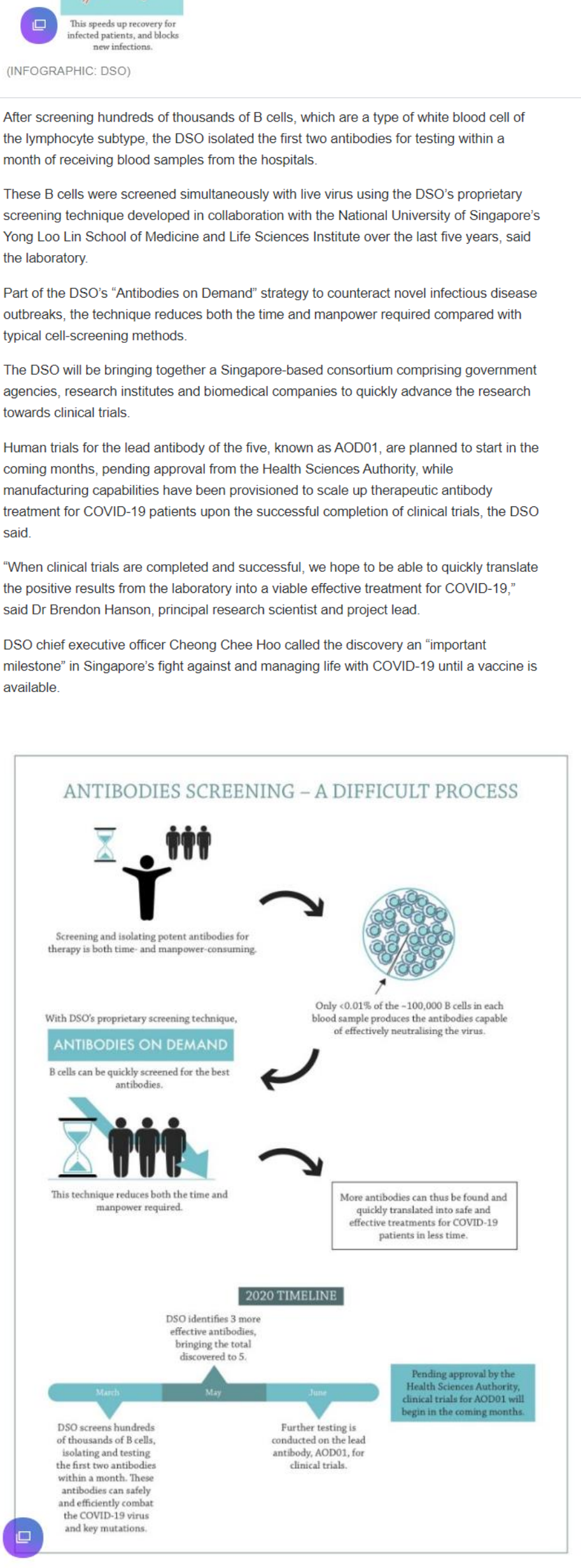
Part of the DSO's "Antibodies on Demand" strategy to counteract novel infectious disease outbreaks, the technique reduces both the time and manpower required compared with typical cell-screening methods.

The DSO will be bringing together a Singapore-based consortium comprising government agencies, research institutes and biomedical companies to quickly advance the research towards clinical trials.

Human trials for the lead antibody of the five, known as AOD01, are planned to start in the coming months, pending approval from the Health Sciences Authority, while manufacturing capabilities have been provisioned to scale up therapeutic antibody treatment for COVID-19 patients upon the successful completion of clinical trials, the DSO said.

"When clinical trials are completed and successful, we hope to be able to quickly translate the positive results from the laboratory into a viable effective treatment for COVID-19," said Dr Brendon Hanson, principal research scientist and project lead.

DSO chief executive officer Cheong Chee Hoo called the discovery an "important milestone" in Singapore's fight against and managing life with COVID-19 until a vaccine is available.



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