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Tychan to begin Ph 1 trials for mAb against COVID-19

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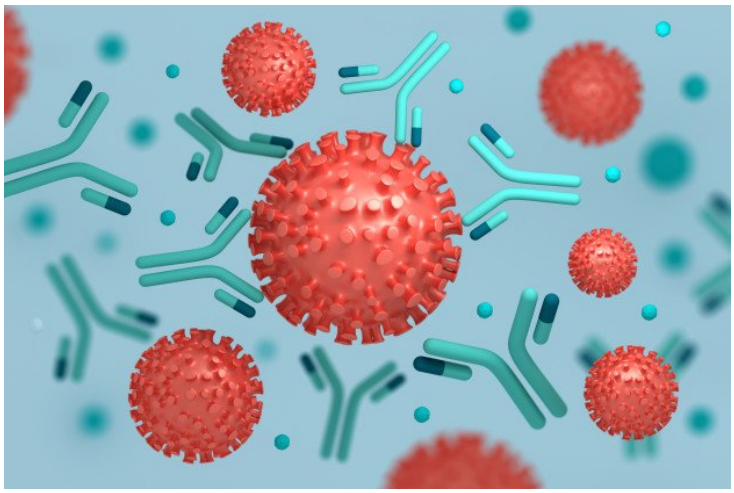
Draws on Experience Developing Treatments for Yellow Fever and Zika in Accelerated Timeframe



With approval from the Health Sciences Authority (HSA), Tychan, a Singapore-based clinical-stage biotechnology company, has completed recruiting and will start dosing healthy volunteers next week for Phase 1 clinical trials to evaluate TY027, a monoclonal antibody (mAb) that specifically targets SARS-CoV-2, the virus that causes COVID-19.

Tychan developed TY027 in partnership with the Whole-of-Government engagement amongst the Ministry of Defence, Ministry of Health, the Economic Development Board and other government agencies. TY027 is being explored for the treatment of patients with COVID-19 to slow the progression of the disease and accelerate recovery, as well as for its potential to provide temporary protection against infection with SARS-CoV-2.

The Phase 1 trial, to be conducted by SingHealth Investigational Medicine Unit, will take about six weeks to evaluate the safety, tolerability and pharmacokinetics of TY027. Upon reaching the key milestones of the Phase 1 trial, Tychan will seek approval from HSA for TY027 to be administered to a larger population of volunteer patients in subsequent trials to establish the efficacy of the mAb.

Presently, there is no proven antibody-based treatment for COVID-19. There is also no licensed vaccine to prevent SARS-CoV-2 infection.

Tychan developed TY027 through extensive and rapid research, including the use of advanced proprietary computational platform technology, and leveraged prior experience in the successful development of therapeutics for Zika and Yellow Fever. TY027, made on 25 February 2020 was identified as the most promising amongst several mAbs that demonstrated 100% neutralisation against live SARS-CoV-2 viruses in the lab. It has also successfully completed safety studies in animals and other regulatory requirements including a 3-week drug stability test. These were all completed in less than four months before this first-in-human infusion.

This four-month timeline is a marked improvement from Tychan's previous mAb efforts with Yellow Fever, which took seven months from design to first-in-human infusion, and Zika, which took nine months. Such development typically takes 12 to 18

months. This systematic improvement validates the significant progress of the development of Tychan's rapid-response platform, made possible by the breakthrough thinking and innovation of its founders Professor Ram Sasisekharan and Professor Ooi Eng Eong and their team.

"Rapidly developing a cure for COVID-19 is exactly the raison d'etre of Tychan. Whilst still a few months away from knowing if we are successful, we are hopeful because of our success in the development of mAbs against Zika and Yellow Fever. We will continue with the fast pace of development as we are conscious that a day saved is a day less of misery," said Teo Ming Kian, Chairman of the Board, Tychan. "Although done with great speed, the development is not fast enough for those who have lost their lives and their loved ones, their livelihoods disrupted and economies that have been ravaged. What we want to do is to not only help people around the world avoid the devastating effects of COVID-19, but to better prepare us for the next unfortunate infectious disease outbreak from the learnings of developing therapeutics for each outbreak", he added.

Tychan's endeavour to build a Rapid Response capability against Infectious Disease Outbreaks with its proprietary technology was first supported by Temasek Foundation Ecosperity and Temasek Life Sciences Lab in the quick set-up of its lab and production facilities, without which this accelerated timeline would not be achieved.