SINGAPORE: A US$2 million (S$2.8 million) research grant for the development of drugs that can help fend off pandemics has been awarded to a team of scientists led by the Lee Kong Chian School of Medicine (LKCMedicine) at Nanyang Technological University (NTU).

The competitive grant was awarded under a major research programme in the United States which is aiming to develop antiviral drugs to combat viruses that can cause pandemics, such as Sars-CoV-2 – which causes COVID-19 – dengue and Zika, NTU said in a statement on Tuesday (Jul 26).

The research to be carried out by the NTU Singapore team is part of the efforts at the Midwest Antiviral Drug Discovery (AViDD) Center for Pathogens of Pandemic Concern based in the University of Minnesota to develop antiviral drugs with a grant by the National Institute of Allergy and Infectious Diseases (NIAID) in the US.

"The Midwest AViDD is one of nine new national centres newly established by the NIAID, part of the US National Institutes of Health, to conduct innovative, multidisciplinary research to develop candidate COVID-19 antivirals, especially those that can be taken in an outpatient setting, as well as antivirals targeting specific viral families with high potential to cause a pandemic in the future," said NTU.

The team is led by Lee Kong Chian School of Medicine associate professor of infection and immunity and provost’s chair in medicine Luo Dahai, a structural virology expert. Dr Liew Chong Wai from the NTU Institute of Structural Biology is also part of the team.

"The Singapore team will leverage NTU’s state-of-the-art molecular and structural biology research platform and facility to identify new antiviral drug targets," the university said.

The AViDD team collaborating with the NTU scientists is led by Professor Reuben Harris, an investigator with the Howard Hughes Medical Institute and professor and chair at the University of Texas Health San Antonio.
The teams will work together "to develop small molecule drug candidates, with an aim to bring the most promising drug candidates to the clinical research stage", NTU added.

Lee Kong Chian School of Medicine dean and NTU senior vice president for health and life sciences Professor Joseph Sung said that the research will build on the university's contributions to the fight against the coronavirus and other viruses.

"NTU Singapore has been playing an important scientific role in the fight against the COVID-19 pandemic and other viral pathogens, with its LKCMedicine leading research projects in preclinical studies of antiviral drug discovery both in Singapore and internationally for viruses like the dengue and Zika viruses," he said.

"This latest grant award is an extension of NTU LKCMedicine's contributions on this front, and I am confident that our scientists will do both the university and country proud in this global effort."

Lee Kong Chian School of Medicine vice dean for research Professor Lim Kah Leong said that the research done by the NTU team will help the world prepare for pandemics beyond COVID-19.

"COVID-19 is a warning that we need to be prepared way ahead of future pandemics," he said.