A team of scientists from Nanyang Technological University (NTU) has won a US$2 million grant to conduct pre-clinical research in Covid-19 drug development.

The grant is awarded by the United States-based National Institute of Allergy and Infectious Diseases (NIAID) and is worth a total of about US$577 million (S$790 million).

The pot of money has been distributed to nine teams, mainly made up of US researchers.

The Singapore team is a sub-team in one of the nine and will be focusing on developing drugs for viruses that can cause pandemics, like dengue, Zika and the Sars-CoV-2 virus that causes Covid-19.

Associate professor of infection and immunity Luo Dahai from the NTU Lee Kong Chian School of Medicine (LKCMedicine) said: "Part of this grant will be used to enhance our understanding of these viruses, the stages of virus infection, among other things."

He added: "The idea is at the end of five years, we will have a few of these promising compounds. We will then work with pharmaceutical companies to bring these into clinical trials."

Prof Luo, who is also provost’s chair in medicine and an expert in structural virology, said in a statement last Tuesday: "Part of this grant will be used to enhance our understanding of these viruses, the stages of virus infection, what we can target to produce better and more effective antibodies. We will do a lot of lab and animal experiments to identify lead compounds which are sufficiently potent, specific and safe."

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Covid-19 has shown that any pandemic can be very damaging, he added. "Even the most experienced experts may not be able to predict when, how and which virus can cause a pandemic and how long it will last. All these questions are very difficult to predict, and instead of waiting for the pandemics to come, we just have to take these kind of semi preventative efforts and study the viruses that are already causing local epidemics," he said.

The research to be carried out by the NTU team is part of the efforts at the Midwest Antiviral Drug Discovery (AViDD) Centre for Pathogens of Pandemic Concern, based in the University of Minnesota, to develop antiviral drugs with a grant by NIAID.

The Midwest AViDD Centre is one of nine new national centres newly established by NIAID 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.