



Professor Peter Preiser with the cellulose-based test he developed to detect proteins produced by the Sars-CoV-2 virus. ST PHOTO: TIMOTHY DAVID

## Peter Preiser

# Tapping malaria research to come up with Covid-19 test

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Tapping his expertise in malaria research, Professor Peter Preiser of Nanyang Technological University (NTU) came up with a paper-strip test to detect proteins produced by the Sars-CoV-2 virus.

The professor of molecular genetics and cell biology did this by adapting technology he had created to differentiate between types of malaria parasites, as he was keenly aware of the need for reliable diagnostics and rapid response in the Covid-19 crisis.

The result is a cellulose-based test that is able to recognise Sars-CoV-2 proteins in a patient's blood sample. If the viral proteins are present, the paper strip changes from white to blue in 10 minutes.

Prof Preiser produced two versions: a serology test that can recognise antibodies from past Covid-19 infections, and an antigen rapid test that can identify those who are infected with Covid-19.

Prof Preiser, who is also associate vice-president for biomedical and life sciences at NTU, said the tests would cost only "a few dollars" each and are able to yield fast results, making them suitable for mass roll-outs.

The serology test could potentially be used pre- and post-vaccination, to ensure that priority is given to those who have not been infected before, and that the administered vaccine has been effective.

Conventional serology tests can take two to 24 hours when performed in a lab, Prof Preiser noted.

His team is now looking at the possibility of a "finger prick method" for blood collection, and a saliva test for convenience.

"The success of the Covid-19 tests has given us a lot of confidence in (our) technology and provided us with a lot of information on how we can use the same approach to detect other biomarkers (for other) infectious diseases," he said.

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