

New test can detect COVID-19 in 20 minutes

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A professor at Anglia Ruskin University (ARU) has developed a robust, reliable assay for COVID-19 that returns results in less than 20 minutes.

Stephen Bustin, professor of molecular medicine at ARU and a leading expert in quantitative polymerase chain reaction (qPCR), which is widely used to detect infectious SARS-CoV-2 in cells, has developed the

assay, called Cov2-ID, with colleagues at Broomfield Hospital in Chelmsford.

The [test](#) detects three viral targets, making it more reliable than other tests that look at just one, and was 100% accurate in almost 30 patient samples taken. The test also has the potential to detect viral load, which is the amount of the virus present in each patient.

Cov2-ID has been developed using Professor Bustin's own MIQE guidelines, which were developed to promote best practice for qPCR assay design and publication, to produce results which are robust, sensitive and fast. It is also designed to minimize the likelihood of a false negative result which may lead to patients unwittingly infecting others.

Full details of Cov2-ID have been unveiled in a pre-print research paper, which has been submitted for peer-review to the journal *Nature Scientific Reports*.

Currently, the UK's testing system is facing problems because of the length of time it takes to get results back from laboratories, many of which are being inundated with tests to process. The Cov2-ID testing process is both fast and simple to carry out, potentially making it ideal for use in venues such as schools, GP surgeries, offices and airports, as well as across the wider NHS Test and Trace system.

Professor Bustin said, "Unfortunately, the existing tests available for COVID-19 are inadequate for testing and monitoring populations for viral spread. The tests not only need to identify who has the virus, but they need to work quickly enough to stop them passing it on. A patient could feasibly take our test, wait in isolation, and receive results in less than 20 minutes. This would in turn prevent the laboratory backlog that is currently hampering efforts to stop the virus circulating in our community."

More information: Stephen Bustin et al. CoV2-ID, a MIQE-compliant sub-20-minute 5-plex RT-PCR assay targeting SARS-CoV-2 for the diagnosis of COVID-19, (2020). [DOI: 10.21203/rs.3.rs-75000/v1](https://doi.org/10.21203/rs.3.rs-75000/v1)

Provided by Anglia Ruskin University

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