

Scientists developing point of care Covid-19 test

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A team of scientists from the University of Surrey, Lancaster University and Brunel University are developing an easy-to-use test that can inform people if they have COVID-19 in just half an hour.

The proposed molecular test and [smartphone app](#) would let people who are self-isolating test themselves, and allow health care workers test both patients and themselves—helping the UK to dramatically upscale its [testing capacity](#).

The battery-operated, hand-held [device](#) is simple and straightforward to use: nasal or throat swabs are placed into the device; then, in 30 minutes, it can identify whether the individual has COVID-19. The samples do not need to go to a laboratory and the same device can test six people at once.

The science behind the test has been used and evaluated in the Philippines to check chickens for viral and bacterial infections. The UK-based team is adapting the Philippines method to detect COVID-19 in humans and is calling on backers to help them mass-produce the kits.

The team is also working on adding a telemedicine functionality to the mobile app that can control the device, track the users' movements and contact anyone who has had a close interaction with the person diagnosed to suggest steps to take in order to reduce the risk of COVID-19 infection and spread.

The estimated cost of the device is approximately £100 each to mass-produce and about £25 to six samples.

Professor Roberto La Ragione, Deputy Head of the School of Veterinary Medicine at the University of Surrey, said: "We are delighted to be involved in the development of rapid diagnostic tools for Covid-19. With a fast response from manufacturers, we could deliver a point-of-care test kit to support mass-scale testing within the NHS and globally."

Professor Wamadeva Balachandran from Brunel University London said: "Now that we know multiple genomes of COVID-19, we can develop the molecular test in a week and have it up and running on the device in three or four weeks. We are confident it will perform well and we urgently need industrial partners to come on board. This innovation is set to have a huge impact on society.

"Normally, anything like this would have to undergo extensive clinical trials, but this is not a normal situation. Speed is essential. With local hospitals' help we aim to do a limited amount of testing using positive and negative samples that are currently available. According to the Imperial College model, this pandemic might last for 18 months—and cases will rise over the next few months. The new [test](#) would be a tremendous help in easing the pressure on the healthcare sector."

Dr. Muhammad Munir, Molecular Virologist at Lancaster University, said: "The team strongly believes that with our combined expertise we will be able to make this device and its associated system available for adoption within a few weeks, and take a step closer to beating COVID-19."

Manufacturers can contact wamadeva.balachandran@brunel.ac.uk

Provided by University of Surrey

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