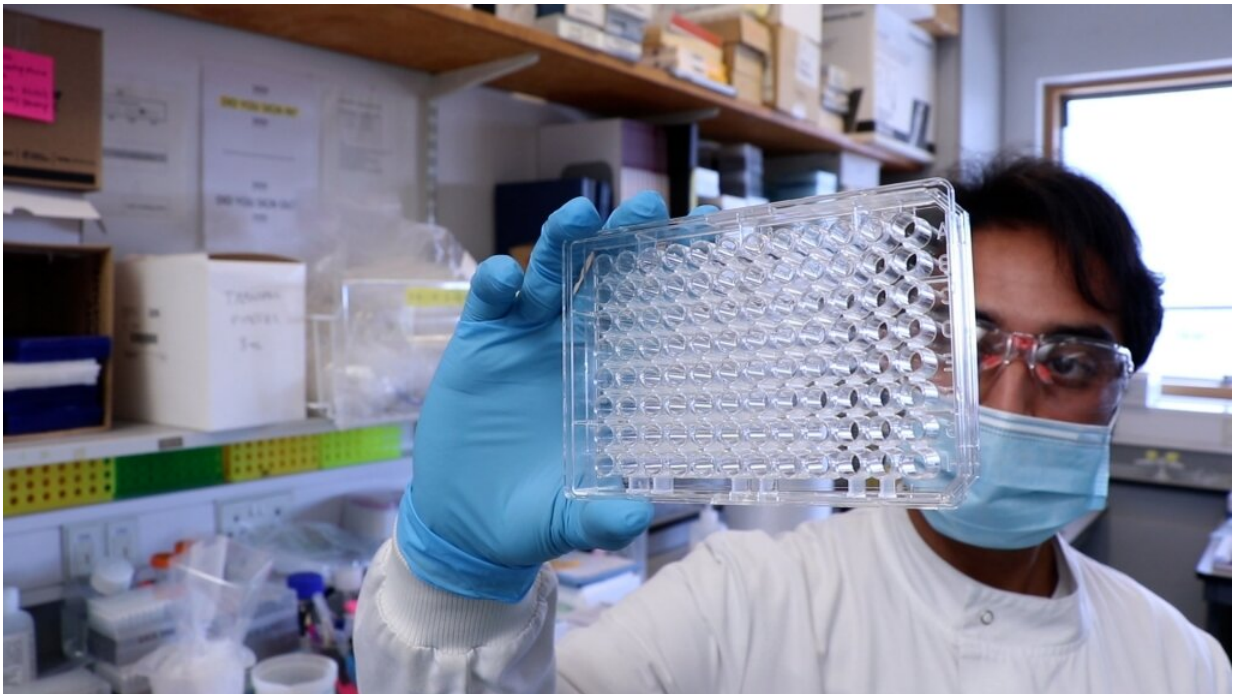


New COVID test more than 99 percent accurate

December 10 2021



Credit: University of Aberdeen

A new test developed by scientists at the University of Aberdeen using AI-assisted technology has proven to be almost one hundred percent accurate in detecting COVID antibodies.

The Universal EpitoGen SARS-Cov-2-test passed the penultimate round of quality assurance assessments by the National Institute for Biological

Standards and Control (NIBSC) with a reported accuracy that would outperform existing COVID tests.

In the NIBSC assessment, the Universal EpitoGen test detected antibody responses to infection by SARS-CoV-2 virus from patient samples with more than 99.5% accuracy and 98.5% specificity.

Unlike the 'traditional,' currently used tests, that can become less accurate as new variants emerge, the innovative EpitoGen technology is just as effective in detecting an antibody response to new variants without losing accuracy. Therefore, the new tests can be used to estimate the prevalence of circulating variant strains in the community, including the OMICRON [variant](#).

Funded by the Scottish Government Chief Scientist Office Rapid Response in COVID-19 (RARC-19) research program, the team of scientists led by Professor Mirela Delibegovic from the University of Aberdeen, with industry partners Vertebrate Antibodies Ltd and colleagues in NHS Grampian, joined forces to develop these new tests using innovative AI antibody technology known as EpitoGen.

The Universal EpitoGen test is one of a suite of tests currently in development. These include tests that can also assess the effectiveness of vaccines against new mutations and allows the incorporation of new mutations into existing tests in a matter of days—something that is not possible using the current technology.

Professor Mirela Delibegovic from the University of Aberdeen and academic lead on the project explains: "The news that our tests are so remarkably accurate is extremely exciting, particularly given the increasing worry around the emergence of new variants.

"These tests can be adapted quickly and efficiently to incorporate new

mutations—an important development, as we are right now realizing the importance of detecting and monitoring new COVID variants.

"So, to have the validation that this test has such a phenomenal level of accuracy is hugely encouraging and important."

Dr. Tiehui Wang, Director of Biologics at Vertebrate Antibodies Ltd, added: "Our EpitoGen platform is paradigm shifting in the serodiagnostic sector.

"As well as COVID-19, the EpitoGen platform can be used for the development of highly sensitive and specific diagnostic tests for infectious and auto-immune diseases such as Lyme Disease and Type 1 Diabetes. The team are now working on development of in parallel to work on COVID-19."

Dr. Abdo Alnabulsi, Chief Operating Officer at AIBIOLOGICS, who helped develop the technology said: "Several international stakeholders are evaluating the COVID-19 tests and the potential of the new EpitoGen platform with a view to roll out in several different countries."

Provided by University of Aberdeen

Citation: New COVID test more than 99 percent accurate (2021, December 10) retrieved 22 November 2023 from <https://medicalxpress.com/news/2021-12-covid-percent-accurate.html>

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