

Study confirms COVID-19 PCR saliva test at least as accurate as nasal swabs

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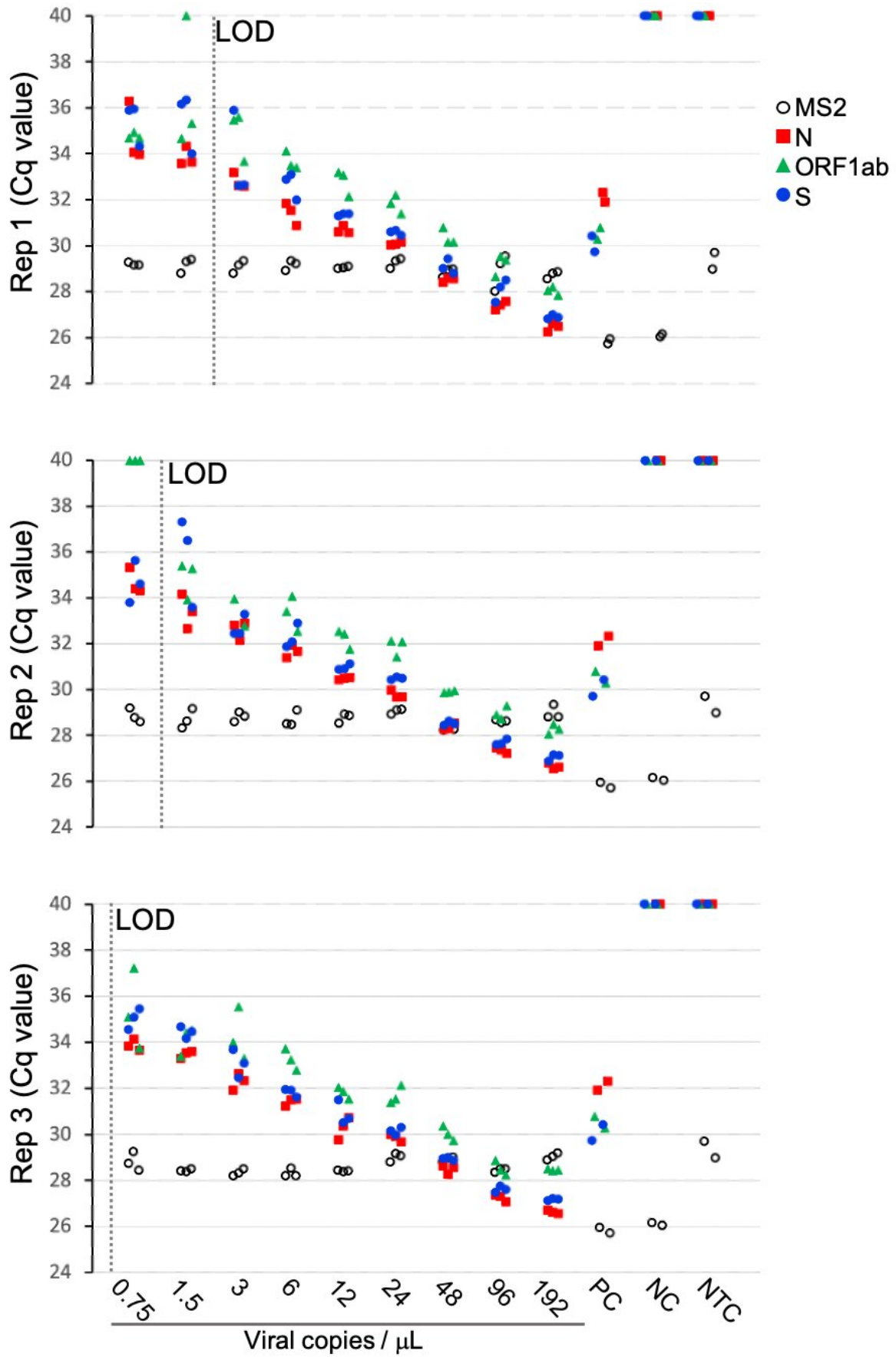


Figure 1: Three replicate experiments of SARS-CoV-2 spiked heat-inactivated saliva serially diluted from 192 to 0.75 viral copies per μL . The Cq values for the three SARS-CoV-2 specific genes (N, ORF1ab and S), as well as for the spike-in control gene (MS2), are shown. A Cq value of 40 was given to undetermined (absence of gene) results. This was the cycle number in which the reaction was stopped. Positive (PC), negative (NC) and no template (NTC) controls were included. Dashed line indicates the limit of detection (LOD) for each replicate experiment. Credit: <https://journal.nzma.org.nz/journal-articles/validation-of-a-molecular-assay-to-detect-sars-cov-2-in-saliva-open-access>

A paper published today in the *New Zealand Medical Journal* confirms the covidSHIELD PCR saliva test developed by the University of Illinois is a reliable option for detecting COVID-19.

Lead author Associate Professor Janet Pitman from Te Herenga Waka—Victoria University of Wellington said the University of Illinois [test](#) had a 99.1 percent accuracy rate in the study reported in the paper.

"It is the first New Zealand study to diagnostically validate a saliva test for COVID-19," Associate Professor Pitman said.

The covidSHIELD test is licensed by Rako Science for use in New Zealand.

Associate Professor Pitman said it performed at least as well as nasopharyngeal swab tests, which have been widely used for COVID-19 surveillance testing in the community.

"With the emergence of new COVID-19 variants, it's more important than ever that we have options for community testing that are acceptable

to people getting tested and deliver reliable results. The covidSHIELD [saliva test](#) meets these criteria."

The covidSHIELD test was developed by a multi-disciplinary team of 150 scientists led by Professor Martin Burke at the University of Illinois in Urbana-Champaign, United States.

Associate Professor Pitman and her team began working with the University of Illinois in September 2020 to validate covidSHIELD for use in Aotearoa. The validation study used 147 saliva samples, each paired with a nasal swab taken at the same time, to measure the reliability of the covidSHIELD test method.

Testing was done at Te Herenga Waka—Wellington University and IGENZ Ltd, a medical test lab in Auckland. Samples were "blind" tested.

The New Zealand research team included Dr. Amanda Dixon-McIver, laboratory director at IGENZ, Dr. Arthur Morris, a microbiologist and pathologist, and Dr. Stephen Grice, director at Rako Science.

"The University of Illinois' covidSHIELD team was excited to support the New Zealand science team led by Associate Professor Janet Pitman and contribute to the *New Zealand Medical Journal* paper published today," University of Illinois executive Discovery Partners Institute Director Bill Jackson said.

"Around the globe, the response to the COVID-19 pandemic has driven a well-head of innovation and new global connections. Our collaboration with Associate Professor Pitman and her team is another example of that.

"The University of Illinois is proud to see its innovation being leveraged at scale in New Zealand to keep Kiwis safe, the covidSHIELD test is

helping to save lives in the United States and we are pleased it is helping save lives downunder," Mr Jackson said.

Te Herenga Waka—Wellington University's Vice Chancellor Dr. Grant Guilford said the validation study was "an important contribution to Aotearoa's public health response to COVID-19. The test provides a practical way to broaden current testing regimens."

"Global research connections have been crucial during the pandemic and the University of Illinois research relationship with Te Herenga Waka is an excellent demonstration of this," Dr. Guilford said.

More information: Janet L Pitman et al, Validation of a molecular assay to detect SARS-CoV-2 in saliva, *New Zealand Medical Journal* (2021). [journal.nzma.org.nz/journal-ar ... n-saliva-open-access](https://journal.nzma.org.nz/journal-ar...n-saliva-open-access)

Provided by Victoria University of Wellington

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