THE USE OF NEAR INFRARED SPECTROSCOPY FOR THE DIAGNOSIS OF SARSCOV2 IN HUMANS
(COD. 2020.016)

COORDINATOR

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RESEARCH AREA

Diagnostic

DEVELOPMENT STAGE

Level 3 - TRL - Analytical and experimental critical function and/or characteristic proof of concept. MRL - Manufacturing proof of concept developed.

PROPOSITION / APPLICATION

The difficulty in running diagnostic tests for COVID-19 on a large scale. Currently, the gold standard diagnosis is PCR, a time-consuming, costly and complex technique to be used in epidemiological surveillance during a pandemic, for example, in tracing contacts.

INNOVATION

The present innovation proposes a rapid diagnosis for SARS-CoV-2 based on near infrared spectroscopy (NIRS). In addition, machine-learning techniques were developed to identify unique diagnostic spectral signatures in biological samples. This methodology allows the diagnosis to be carried out in just 5 seconds, with a cost 110x lower than PCR.

OPPORTUNITY

Offering diagnosis using a fast, simple and low-cost technique, which can help in the previous screening of suspected cases and optimize the mass diagnosis of COVID-19.

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