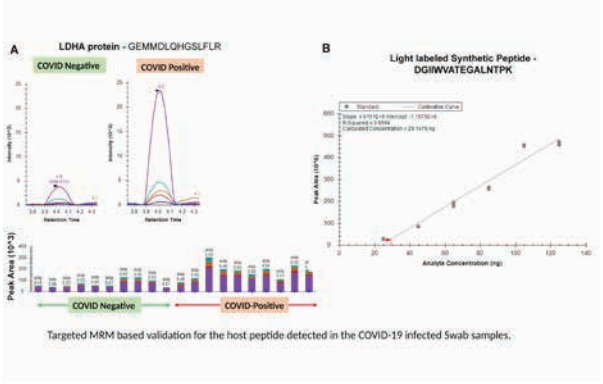
Peptide-based Test for Prognosis of SARS-CoV-2 Infection



Problem Statement: The COVID-19 infections have been spreading at an alarming rate, and the severity of this outbreak remains unclear. Currently, RT-PCR is able to detect the infection; however, predicting the progression of disease severity in a patient remains a challenge. Knowing the severity and likely progression of the disease can help hospital management take timely action for cases that are likely to face severe disease progression. The researchers have addressed the need for the prediction of SARS-CoV-2 infection progression through their proposed peptide-based test using a technique called selected reaction monitoring (SRM) assay. Their method can help the hospital management process by identifying the risk level faced by patients who test positive for SARS-CoV-2.

Uniqueness of the Solution: The targeted SRM assays with the specific peptide-protein panel of COVID-19 severity biomarkers can predict the progression of the disease. Thus the test gives more information than the widely used RT-PCR test. Currently, there are no similar products available in the market.

Current Status of Technology: The researchers have completed experimental proof of concept. They have also tested and validated their proposed method on patients' samples.

Societal Impact: Targeted SRM high-throughput assay is a rapid test. It can perform extensive scale screening of the samples and identify the more vulnerable patients. This test can also be used for the detection of other infections such as malaria and dengue in the COVID-19 infected patients and ensure proper direction of treatment. Therefore, the researchers envisage that the product will be in high demand in the global markets for the COVID-19 prognosis.

Patent(s): Filed

Relevant Industries: Healthcare, Biotechnology, Medical Devices.

Faculty: Prof. Sanjeeva Srivastava, Biosciences & Bioengineering.