

**PRO-Media Coordinator's Office  
Jamia Millia Islamia**

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Press Release

**Researchers at JMI develop MI-SEHAT, saliva based testing kit to detect COVID-19**

In a path-breaking discovery, the team of scientists from Multidisciplinary Centre for Advanced Research and Studies (MCARS), Jamia Millia Islamia (JMI), Dr. Mohan C Joshi, Assistant Professor (UGC-FRP & DBT/Wellcome Trust India Alliance fellow), Dr. Tanveer Ahmad, Assistant Professor (UGC-FRP) and Dr. Jawed Iqbal, Ramalingaswami Fellow (DBT), in collaboration with Dr. Rohit Kumar from VMMC (Safdarjung Hospital) and Dr. Gagan Deep Jhingan, CEO of Valerian Chem Ltd has developed RNA extraction free saliva-based detection technology for COVID-19.

The technology is named MI-SEHAT (Mobile Integrated Sensitive Estimation and High-specificity Application for Testing) and can be used as point of care (POC) device for COVID-19 detection in the field with a provision for at-home testing.

Explaining about the new technology Dr Mohan C Joshi of the team said that the smartphone-enabled POC prototype has been developed and validated using synthetic SARS-CoV-2 RNA, which displays results within an hour without the intervention of a technical expert.

Dr Joshi further said that, in such a difficult time when the rapid diagnosis of COVID-19 remains the effective measure to contain and manage the viral spread, cost-effective rapid testing of SARS-CoV-2 RNA remains the gold standard. The available standalone or integrated PCR based detection kit remains confined to the sophisticated instrumental diagnostic laboratory setup and takes minimum 2-3 hr in providing the result with the need for error-prone RNA extraction step.

Ph.D students, MD Iqbal Azmi and Md. Imam Faizan at MCARS, JMI has bench marked all the experiments in the laboratory which has helped the team to develop the prototype.

Dean, Faculty of Natural Sciences, Prof. Seemi Farhat Basir, Director MCARS, Prof. M. Zulfeqar, Dy. Director, Dr. SN. Kazim, and other faculty members in the MCARS also helped in the work and provided valuable feedback and timely assistance.

The team has submitted provisional application for the patent of the new technology at Intellectual Property India Office, Government of India.

JMI Vice Chancellor Prof. Najma Akhtar said that this technology could be a game-changer in the fight against the global Pandemic. MI-SEHAT is a true example of smart innovation and reflects the true spirit of Atmanirbhar Bharat. Being a user-friendly technology, MI-SEHAT will encourage home testing thus will restrict interaction and movement of COVID-19 positive patients outside the home. Further, it will reduce exposure of our healthcare professionals to COVID-19 positive patients who are directly or indirectly engaged in testing.

While congratulating the entire team Prof. Akhtar said that JMI is committed towards cutting-edge research and innovation ecosystem within the campus. She applauded the efforts of scientists of the university who have risen up to the occasion to fight the global pandemic and urged them to strive for innovative solutions with societal relevance.

Director MCARS, Prof. M. Zulfequar said that MI-SEHAT will facilitate rapid screening and health-experts intervention in India's rural setting where the healthcare system is not as robust as urban areas.

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