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New tech platform to detect SARS-CoV-2 by fluorescence readout

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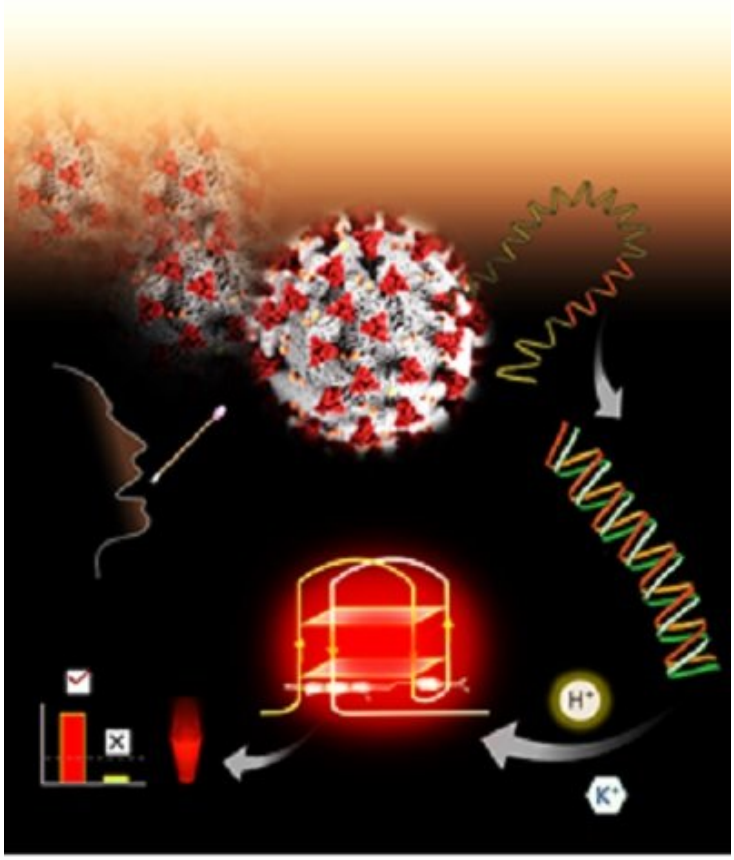
The technology platform can be used to detect HIV, influenza, HCV, Zika etc.



Scientists from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute of the Department of Science & Technology, Government of India, along with scientists from IISc (India Institute of Science), have demonstrated a noncanonical nucleic acid-based G-quadruplex (GQ) topology targeted reliable conformational polymorphism (GQ-RCP) platform to diagnose COVID-19 clinical samples. This work has been published recently in the journal*ACS Sensors* and the team has also filed a patent for the novel technology.

The technology platform can also be used to detect other DNA/RNA pathogens such as HIV, influenza, HCV, Zika, Ebola, bacteria, and other mutating/evolving pathogens.

The platform lays greater emphasis on deciphering and systematic characterization of a unique set of interactions in nucleic acids to attain stable and reliable noncanonical DNA/RNA targets. The RCP-based target validation is a general and modular approach for the development of noncanonical nucleic acid-targeted diagnostic platforms for diverse pathogens, including bacteria and DNA/RNA viruses.