PRESS RELEASE

IIT Hyderabad Researcher Develops AI-Powered Low-Cost, Point of Care COVID-19 Testing Kit

Costing only around Rs. 600, the test can produce results in 20 minutes as it does not required RT PCR, and has already been field-tested at ESIC Medical College and Hospital in Hyderabad

HYDERABAD, XX June 2020: Indian Institute of Technology Hyderabad Researcher has developed an Artificial Intelligence-powered COVID-19 test, which can be performed at an affordable cost. The test kit can produce results in around 20 minutes for symptomatic and asymptomatic patients.

The test kit has already been field tested at ESIC Medical College and Hospital in Hyderabad to ascertain its efficiency. It can be transported quickly, enabling the test to be conducted at the point-of-care. **A major benefit of this testing kit is that it does not require RT-PCR (Reverse Transcription Polymerase Chain Reaction).**

Each test costs around Rs. 600 device now. However, mass production of the testing kit will help reduce the cost to around Rs. 350 per test.

The testing kit was developed by a team led by Prof. Shiv Govind Singh, Department of Electrical Engineering, IIT Hyderabad. Dr. Surya Tripathi, Ms. Supraja, other students from Prof. Shiv Govind Singh's Research Team, institute faculty and funding agencies supported this project.

Speaking about the role of IIT Hyderabad in helping tackle the COVID-19 pandemic, Prof B.S. Murty, Director, IIT Hyderabad, said, "*Since the outbreak of COVID-19, IIT Hyderabad has put together its research expertise to come up with the possible solutions to contain the epidemic. The effort of Dr. Shiv Govind Singh is one such, and we strongly believe that it can help humanity in a big way. Once these testing kits are produced in mass, it will enable us to scale-up the testing for COVID-19 suspects in a widespread manner.*"

A Major Objective of the Research Team in coming up with this Test Kit was to break the transmission chain through affordable testing. **The Unique points of this testing kit include identifying the unique sequence of conserved region of COVID-19 genome and detecting it without PCR/RT-PCR.**

Highlighting the benefits of this testing kit, Prof. Shiv Govind Singh, Department of Electrical Engineering, IIT Hyderabad, said, "*The Research Team has the manpower and the capability required for mass production of this testing kit. We are now planning*

to raise funds from various Government and Private sources towards this end. This device is IIT Hyderabad's small contribution to the Nation at the time of this crisis."

Prof. Shiv Govind Singh and his team have also developed AI (Artificial Intelligence) tools to capture extensive data points to minimize the errors in the decision making. He is now seeking the approval for mass production of the test kit from Indian Council of Medical Research (ICMR), He will also be filing for a patent for the device.

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About IIT Hyderabad

Indian Institute of Technology Hyderabad (IITH) is one of the six new Indian Institutes of Technology established by the Government of India in 2008. In a short span of around a decade, the institute built on an imposing 570-acre campus and has been ranked among the top ten institutes for four consecutive years in the National Institute Ranking Framework (NIRF) released by the Ministry of Human Resource Development (MHRD), Government of India. The Institute was also ranked #10 in the first edition of Atal Ranking of Institutions on Innovation Achievements (ARIIA) introduced this year by MHRD to systematically rank all major higher educational institutions and universities in India on indicators related to 'Innovation and Entrepreneurship Development' among students and faculties.

IIT Hyderabad has close to 210 full-time faculty, 2,855 students of whom 20 per cent are women, nearly 200 state-of-the-art laboratories and five research and entrepreneurship centers. The Institute has a strong research focus with more than Rs. 500 crore of sanctioned research funding while Ph.D. scholars account for about 30 per cent of total student strength. IITH students and faculty are at the forefront of innovation with more than 1,500 research publications and patent disclosures, 300 sponsored/consultancy projects and 50 industry collaborations. IITH has MoUs with 50 universities in the U.S., Japan, Australia, Taiwan and Europe. IITH has been pioneering change in pedagogy with fractal academic programs that atomizes course modules, encourage interdisciplinary learning spanning innovative technology, fundamental science, liberal arts and creative arts like photography, theatre and painting.

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