**IIT-Kharagpur Developed COVID-19 Test Receives Certification from Indian Council of Medical Research (ICMR)**

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IIT Kharagpur has developed a new testing method for COVID-19. Named ‘COVIRAP’, the device is highly reliable, accurate, portable, and ultra-low cost with an estimated price of Rs. 500 (less than $7) per test. Recently, it was successfully validated for its efficacy in COVID-19 detection by the Indian Council of Medical Research (ICMR).

The project was led by Prof. Suman Chakraborty, Professor, Department of Mechanical Engineering, IIT Kharagpur, and Dr. Arindam Mondal, Assistant Professor, School of Bioscience, IIT Kharagpur. Additionally, there was a team of doctoral students that also assisted in the research and development of the device.

Monetary support for this project was provided by IIT Kharagpur Foundation of USA and IIT Madras alumnus, Anand Rajaraman. Ron Gupta, President of the IIT Kharagpur Foundation of USA said, “This donation will put IIT Kharagpur on a global map as a pioneer in developing innovative solutions to the unprecedented pandemic of Novel Corona Virus-19.” Rajaraman continued, “An inexpensive, scalable, and highly accurate COVID test can be a game-changer in the fight against this virus, especially in the developing world. This research project has the promise of helping curb the global pandemic and save many, many lives.” Partial financial support was also supplied by the Common Research and Technology Department Hub on Affordable Healthcare, established by the Department of Scientific and Industrial Research (DSIR), Government of India, at IIT Kharagpur.

The ICMR certification comes after rigorous tests of patient samples were taken to an authorized ICMR laboratory. The test was designed to be easy to conduct and can produce results in a custom-developed mobile phone application within one hour. Furthermore, during testing it was concluded that this test’s standards are comparable to the celebrated RT-PCR tests, demonstrating a high level of specificity and sensitivity, two of the common parameters used as indicators of efficacy of any diagnostic test.

IIT Kharagpur Director, Prof. V.K. Tewari, spoke about potential commercialization of ‘COVIRAP’, “While the Institute can produce the testing kit up to a certain scale, patent licensing will facilitate commercialization opportunities for medical technology companies. Any corporate or start-up can approach the Institute for technology licensing and commercial scale of production. The Institute is open to tie-ups, with due measures of protecting the interest of public health amidst the pandemic situation.”

In conclusion, Prof. Suman Chakraborty remarked, “Today, it is COVID-19; yesterday, it was leprosy and tuberculosis; tomorrow, it will be something else. This technology is all set to create a revolution in rapid and low-cost detection of all these, by bringing high-end molecular diagnostics from the lab to the field. The impact of this, therefore, is long-lasting, empowered by the capability of detecting unforeseen pandemics in the coming years that may potentially endanger human lives time and again.”

Congratulations to Prof. Chakraborty, Dr. Mondal, and team on this critical innovation!

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