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IIT-M partners with General Insurance Corporation of India to develop urine-based TB diagnosis technology

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Expected to be rapid and affordable in comparison to the existing TB diagnostic tests



The Indian Institute of Technology Madras (IIT-M) is partnering with General Insurance Corporation of India (GIC Re), a public sector Undertaking, to develop a urine-based tuberculosis (TB) diagnosis or screening technology.

The envisaged product for urine-based TB screening/diagnosis is anticipated to be faster and far more affordable than the existing point-of-care diagnostic kits available for various diseases such as blood glucose monitors.

The key beneficiaries of this project, which is getting CSR funding from the GIC Re, will be primary, secondary, and tertiary healthcare centres besides the health departments in State and Central Governments.

IIT-M has partnered with over 180 entities under Corporate Social Responsibility (CSR) and has raised over Rs 250 crore to implement 200+ projects till date.

The Biosensors Laboratory at lIT-M is developing a novel plasmonic fiber optic absorbance biosensor (P-FA8) technology. They have established a laboratory-level proof-of-concept for the detection of a well-reported tuberculosis biomarker in urine, known as 'Lipoaabinomannan (LAM).'

In parallel, the associated technologies for the fabrication of fiber optic sensor probes and readout device schemes have been designed and developed and the technology is transferred to two start-ups based in India and US. The next step towards bringing the urinary marker-based TB diagnosis is the systematic clinical validation study of the P-FAB diagnostic technology with TB patient samples.

IIT-M will be developing the proof-of-concept for the urine-based TB screening/diagnosis. The know-how and the relevant technologies will be made available to startups or diagnostic kit manufacturers.