CRISPR-Cas based TB detection system

Domain: Diagnostic (Assay/Kit

About Technology: This detection system performs heat-based lysis and column DNA extraction (RapidBact), followed by multiplex PCR and CRISPR-Cas12a detection (Glow-TBPCR). Cas12a, guided by TB-specific gRNAs, produces a fluorescence signal upon target recognition. The RapidGlow device supports incubation and real-time fluorescence detection, with RGLOW software enabling automated data analysis

Intended Use: Diagnosis of tuberculosis

Advantages:

- Rapid DNA extraction from as little as 60 µl of sputum
- Multiplex detection of 3 TB genes; ultra-sensitive (LOD ~1 copy/µl)
- High-throughput, and cost-effective alternative to centralized diagnostics

IP Status: Filed (Indian Patent Application No. - 202411016083, 202411043686, 202511026919)

Technology Transfer Status: Transferred to companies on Non-Exclusive basis

Institute(s): ICMR-Regional Medical Research Centre (RMRCNE)

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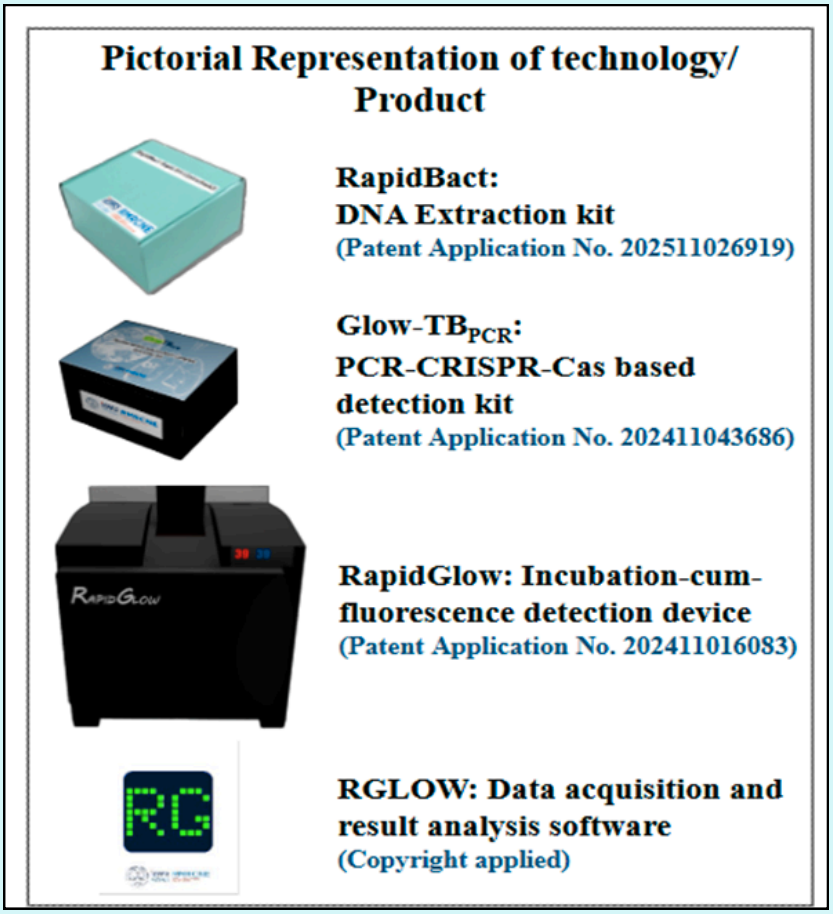

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