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ICMR strengthens strategies for faster and more accurate diagnostics of Tuberculosis

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Government encourages all innovators to develop useful tools and help achieve the goal of TB elimination



Union Minister of State for Health and Family Welfare, Anupriya Patel inaugurated the India Innovation Summit – Pioneering Solutions to End Tuberculosis (TB), at Bharat Mandapam Convention Centre, on 18th March in Delhi. The Summit is being organised jointly by the Department of Health Research-Indian Council of Medical Research (DHR-ICMR) and the Central TB Division (CTD), Ministry of Health & Family Welfare (MoHFW). The summit aims to accelerate India's progress towards TB elimination by 2025.

Underlining the new innovations rolled out under the TB Mukt Bharat– 100 Days Intensified Campaign, the Minister stated that, “ICMR has validated three indigenous handheld X-ray devices, which makes it possible to reach vulnerable population groups for TB screening. Hand-held devices offer advantages of low weight, portability, and low radiation exposure and are being used in the 100-day accelerated programme.”

She also added that “ICMR partnered with Institute of Plasma Research, Ahmedabad, to develop DeepCXR, a tool for artificial intelligence-based reporting chest X-ray films. ICMR has also validated CyTb skin test for detection of latent TB infection, developed by Serum Institute of India against Interferon gamma release assay (IGRA), which is the preferred test for latent TB detection. However, IGRA is expensive and it may not be feasible to be introduced in resource limited countries. Overall performance of CyTb was better than the currently used tuberculin skin test.”

She further added that “ICMR conducted a multicentric validation of PathoDetect, an indigenous molecular diagnostic NAAT test which can perform 32 tests simultaneously, detects MTB complex and first line drug resistance to rifampicin (RIF) and Isoniazid (INH) simultaneously as a one step process. Overall, the performance of PathoDetect was comparable to other molecular assays. Deployment of this test in the 100-day programme, along with the already available TruNat test, has enhanced capacity of molecular diagnosis of TB and early detection of drug resistance. Moreover, the Quantiplus MTB FAST Detection Kit developed by Huwel Lifesciences is the first in world indigenous open system RTPCR kits developed in India and validated by ICMR. In comparison to the gold standard liquid culture, sensitivity of the kit is 86% and specificity is 96%. These kits are likely to be low-cost and have a potential to expand the outreach of TB molecular testing, including more than 3300 RTPCR machines used during the COVID-19 pandemic.”