

A better tool to diagnose tuberculosis

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A lab technician from the University of Bern demonstrates the protocol for using the Xpert MTB/RIF assay to diagnose tuberculosis. Credit: © Journal of Visualized Experiments

Up to 30% of the world's population is infected with Tuberculosis (TB), but in many areas of the world, TB diagnosis still relies on insensitive, poorly standardized, and time-consuming methods. A new diagnostic tool, endorsed by the World Health Organization (WHO), may change that. Dr. Thomas Bodmer shows how it's done in the *Journal of Visualized Experiments (JoVE)*.

Currently, TB is diagnosed through either a [skin test](#), which produces a small bump on the patient's arm when administered and needs to be checked after 72 hours, and through smear microscopy, a method that was developed over a century ago. The new test is fully automated and

takes about an hour and a half to give results. It is also able to determine if the patient is infected with a multidrug-resistant strain of the bacteria.

"The Xpert MTB/RIF assay is intended for use with specimens from patients for whom there is suspicion of [pulmonary tuberculosis](#) and who fulfill the criteria outlined in the accompanied text," said Dr. Bodmer, who co-authored the article.

WHO endorsed the test in 2010, and is working to roll it out across tuberculosis-affected countries. An important aspect of this is training people to use the device, and the *JoVE* video-article will help with standardization. *JoVE* is the only peer reviewed, PubMed-indexed science journal to publish all of its content in both text and video format.

"TB is one of the most deadly infectious diseases worldwide and accurate and rapid diagnosis is essential for timely and proper treatment. This test is expected to dramatically improve the diagnosis of TB," said *JoVE* Science Editor, Dr. Charlotte Frank Sage. "Publication of the protocol in *JoVE* allows researchers around the world to see a detailed demonstration of this [diagnostic tool](#) and will aid in establishing this technology in their laboratories and clinics."

More information: The article will be published on April 9, and can be seen here: [www.jove.com/video/3547/diagno ... e-xpert-mtb-rif-test](http://www.jove.com/video/3547/diagno...e-xpert-mtb-rif-test)

Provided by The Journal of Visualized Experiments

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