

Tulane Researchers Develop Rapid TB Test Using Tongue Swabs

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Tulane University researchers, led by [Tony Hu, PhD](#), and [Zhen Huang, PhD](#), have developed a breakthrough CRISPR-based tuberculosis test that works with a simple tongue swab, offering results in just 45 minutes. Unlike current tests that require sputum samples, which are difficult to collect and often miss cases, the new method makes testing faster, easier, and more accessible.

In clinical trials, the test showed higher detection rates than traditional methods, with significantly improved accuracy for patients who cannot produce sputum, such as children, people with HIV, and those with extrapulmonary TB. The simple “one

pot” approach works much like a COVID-19 test: a swab sample is added to a pre-loaded tube, incubated, and delivers clear results on a test strip.

With more than 10 million people falling ill with TB every year and 40% of cases going undiagnosed, Tulane’s innovation could transform community-based screenings worldwide. Hu, who directs the Tulane Center for Cellular and Molecular Diagnostics, said the study represents a major step toward moving TB testing out of the lab and into the communities where the disease spreads.

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