



# Diagnostics for tuberculosis

## FAST FACTS

**Tuberculosis (TB) kills more people than any other single infectious disease, including HIV.** Low- and middle-income countries (LMICs) overwhelmingly bear the highest burden, and the impact of the disease on individuals and communities is devastating.

**Every year, millions of TB infections go unidentified,** preventing patients from accessing treatment, and allowing the disease to spread. Drug resistance is a growing threat.

**High accuracy, short time to obtain a result, and simple use at an affordable price can be significant challenges for current TB diagnostic tools.** It takes weeks to grow bacteria for a culture test, the current best test for TB. Sputum smear microscopy is currently the most commonly used first test for diagnosis: it is inexpensive and widely available but not very accurate – and children and HIV+ people often cannot produce a sputum sample.

**Ensuring that the right tools are accessible where they are needed is not straightforward,** and development of any new diagnostic test has to take into account the context in which it would be used.



Diagnostics are essential to detect both disease and drug resistance, enabling patients to start the most appropriate treatment, first time. As TB is so contagious, linking patients to care as soon as possible also limits the opportunity for the infection to be passed on. The global community has made a commitment to end the TB epidemic by 2030, but critically needed new tools are at risk due to chronic underfunding for this deadly disease.

– Morten Ruhwald, Head of TB, FIND

## FIND TB STRATEGY



We are working with our partners and donors to make **easy-to-use, robust, reliable and highly accurate tests** a reality in routine clinical settings, particularly at the lower levels of care. Our R&D efforts are focused on areas of critical unmet need:

- **A user-friendly, low-cost, non-sputum-based rapid test** for diagnosing active TB that can be used for active case-finding and in primary healthcare facilities.
- **Rapid drug-resistance tests** that enable treatment regimens to be tailored to individuals and help to safeguard medicines against antimicrobial resistance.



In parallel, we are developing **strategies to increase and speed up access to both new and existing tools.** This includes supporting the evaluation of new tests so that WHO and other regulatory bodies can make recommendations and decide how new approaches should be incorporated into guidelines, as well as working with countries to define **local implementation needs**, including NGS.



We are also exploring **digital technologies to enhance diagnostic connectivity** and data utilization for optimal health impact.