



*Access to accurate and early diagnosis is critical to malaria control*

## **About Malaria**

Malaria is one of the greatest global threats to public health, causing over 300 million cases of acute illness worldwide, and resulting in over a million deaths each year; 80-90 percent of these occur in sub-Saharan Africa. However, Asia, Latin America, the Middle East and parts of Europe are also affected.

The most serious form of the disease is caused by the malaria parasite *Plasmodium falciparum*, transmitted via the bites of infected mosquitoes. In the human body, the parasites multiply in the liver, and later within red blood cells. Symptoms of malaria include fever, headache, and vomiting, and usually appear between 10 and 15 days after being infected. If not treated, malaria can quickly become life-threatening. In many parts of the world, the parasites have developed resistance to a number of malaria medicines.

Strategies for control of malaria include the use of artemisinin-based combination therapies, insecticide-treated nets and indoor residual spraying with insecticides to control the mosquito vector. Although malaria is both preventable and curable, more than one million people die of malaria every year, mostly infants, young children and pregnant women.

## **Why malaria diagnostics?**

- Malaria has been classically diagnosed using microscopy. Unfortunately, this technology is relatively complex and cumbersome to implement, and gives quite variable results even in the hands of highly experienced microscopists.
- It is estimated that 50-80% of the fever episodes currently treated as malaria are not confirmed by parasitological testing.
- Simple and reliable tests are needed that can be used by community health care workers.
- Over the past decade, a number of rapid diagnostic tests (RDTs) that can detect malaria antigens in a finger prick blood sample have been developed. They are much simpler to use than microscopy and are an important advance in diagnosis.
- RDTs are produced by a number of different manufacturers but their quality and performance are unpredictable and not very stable in temperatures that are common where malaria is endemic. This problem needs to be addressed to prevent misdiagnosis.

---

References: World Health Organization: <http://www.who.int>

For more information on FIND's projects, please visit: <http://www.finddiagnostics.org>