FIND'S VISION IS OF A WORLD WHERE DIAGNOSIS GUIDES THE WAY TO HEALTH FOR ALL PEOPLE.

FIND
Because diagnosis matters

Why diagnostics?

Diagnostics improve patient health by enabling accurate treatment, facilitating health care interventions and measuring progress. This is the basis for eliminating diseases, promoting health, improving the efficiency of health care spending and preventing antimicrobial resistance. The end goal of diagnostics is to save lives and empower individuals, communities and countries to have a better future.

FIND and innovation

Innovation begins with ideas. Ideas only have real value and are truly innovative when implemented as solutions. FIND's role in innovation is to turn complex diagnostic challenges into simple implementable solutions. For this to happen, ideas must be nurtured, developed, engineered, tested and championed.

FIND is a mobilizer, bridge builder and enabler. From initial development through final implementation, we use our expertise and create efficient partnerships to ease every step of diagnosing poverty related diseases – and this all begins with dialogue.

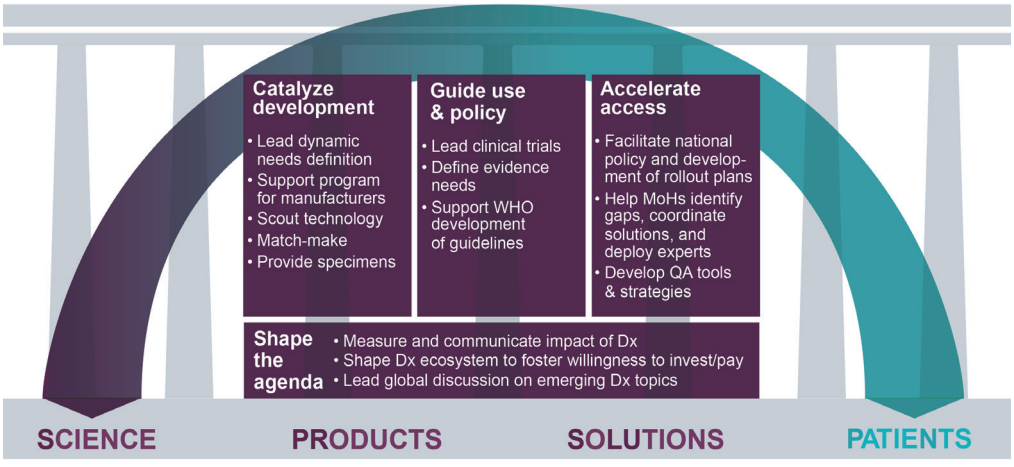
At each stage of our work, we start not with answers, but with questions. The key is to understand local conditions from the perspective of the people living there, which enables us to overcome technical, cultural and logistical barriers to improving health.

We empower our local and international partners to develop new solutions that fit the needs of communities and pave the way for the development and proper use of quality, innovative diagnostics.

FIND as a partner of choice

FIND was founded in 2003 to bridge existing development gaps for essential diagnostics by initiating and coordinating research and development (R&D) projects through partnerships with the international research community, the public sector and the *in vitro* diagnostic industry. Through our programmes in tuberculosis, sleeping sickness and malaria, we have delivered 11 tests and have helped transform the diagnostics landscape for each of these disease areas. As a WHO Collaborating Centre, FIND works closely with WHO on lab strengthening, test evaluation and implementation.

To support our new vision and mission and promote this strategic shift, we will organize for action around four strategic goals:



By the end of 2020, FIND will have another 15 essential and innovative diagnostic solutions in use to support improved health for all.

Saving lives, fighting diseases of poverty

Diseases of poverty disproportionately affect people in low-resource countries with already fragile health care systems. All of our work is centred around improving the health of patients and empowering health care providers.

We will deliver life-saving diagnostic solutions in the following priority disease areas: Tuberculosis and Acute Febrile Respiratory Infections, Malaria and Acute Febrile Syndrome, Hepatitis C, and Neglected Tropical Diseases.

We will also launch mini-portfolios in areas affecting reproductive and child health: HIV, sexually transmitted infections, and infections and nutritional deficiencies in children under five years old.


© Samson Olajide Banjo

Improving children's health through Xpert MTB/RIF

The global health care community has made much progress in the fight against tuberculosis (TB) over the past five years thanks to international collaborations to develop new diagnostics, for example the Xpert MTB/RIF assay. This innovative diagnostic solution was launched in partnership with FIND and endorsed for use by WHO in 2010 as a new tool to identify multidrug-resistant forms of TB and dramatically reduce TB diagnosis time from 120 days in a reference-level laboratory to 90 minutes at a district-level hospital.

However, each year an estimated three million patients, or one-third of people infected with TB, still do not receive diagnosis and treatment. It is especially hard to diagnose tuberculosis in vulnerable individuals like children and HIV-positive patients who cannot easily give a sputum sample.

As a promising solution to diagnose these patients, WHO recommended the Xpert MTB/RIF assay in 2013 for the diagnosis of rifampicin resistance in paediatric and extra-pulmonary TB, in addition to pulmonary TB. Moreover, the assay is being adapted to reach hard to diagnose patients like young children through a stool sample processing method. This innovative and promising approach will make diagnosis and treatment a reality for children and other patients who have previously gone without testing.

From individual tests to solution-based diagnostics

FIND's strategy has evolved from a focus on individual diagnostic technologies to supporting complete diagnostic solutions. A smart diagnostic solution comprises a diagnostic test that is just right for the need, together with a suite of supporting interventions that ease the way to improved access and use in weak health systems.

This package simplifies diagnosis throughout the diagnostic ecosystem, reduces costs, provides technical assistance for correct use and ensures the overall efficiency of the test. We also focus on cross-cutting themes that apply to more than one disease, enabling us to be more effective in our interventions across disease areas and regions.

A safer, more accurate tool for rapid malaria detection

Malaria is a highly treatable disease, yet millions of people continue to suffer and die from it because of a lack of correct diagnosis. Malaria often presents with symptoms similar to other diseases, highlighting the vital need for accurate diagnostics to control and eliminate the illness. Rapid diagnostic tests (RDTs) are increasingly being used in low-resource countries by personnel with little or no training in laboratory techniques. Community health care workers such as these have difficulties in drawing a precise amount of blood for RDTs, reducing the accuracy of the test and compromising the safety of the worker.

FIND has responded to these challenges by developing a simple 5 ul blood transfer device with an inverted cup design that is more user-friendly for health care workers. After several years of successful field trials in Uganda, Nigeria and the Philippines, the product has been widely adopted by malaria RDT manufacturers, with an estimated 100 million of the devices reaching patients with fever in 2013 alone.

Cross-cutting themes in FIND's work

In order to reach more patients with vital diagnostics and increase our impact, we have identified several cross-cutting themes that are relevant to more than one disease. Through a strategic emphasis on these themes, FIND will increase our influence and realize synergies across disease areas and geographic regions. In the area of diagnostic development, we will prioritize **syndrome-based approaches** to best address patient and clinician needs, e.g. focusing on cough or fever, and design more accurate tests to **address infection in asymptomatic patients** to enable disease elimination and eradication.

Through more effective diagnostic solutions and point-of-care approaches, we will fight the growing **threat of antimicrobial resistance** by addressing incorrect and over-treatment of patients.

We place a high priority on ensuring that tests are compatible with **eHealth solutions** and accompanied by supporting IT connectivity tools for safe, efficient and appropriate collection, storage and transmission of valuable diagnostic data. The potential impact of this approach reaches beyond the care of the individual patient to include health systems and device management.

In development:

- Syndromic approaches to diagnosis
- Infection detection in asymptomatic
- Antimicrobial resistance

In delivery:

- Electronic health
- Post market surveillance, quality control
- Intervention design to maximize patient access

Our core programmes:

- **Tuberculosis**
- **Acute Febrile Respiratory Infections**
- **Neglected Tropical Diseases**
- **Malaria**
- **Acute Febrile Syndrome**
- **Hepatitis C**

Supplementary programmes:

Areas affecting reproductive and child health: HIV • Sexually transmitted infections • Nutritional deficiencies in children under five years old

Empowering health care workers with a HAT RDT

Accurate and affordable diagnostics are key to treating patients with sleeping sickness, or human African trypanosomiasis (HAT), because the patients with the disease show no clinical signs of infection. Health care workers in low-income settings face many difficulties in diagnosing patients, including infrastructural challenges and cost-restrictive testing.

With partners, FIND launched a tool aimed at empowering health care providers in weak health systems: a HAT rapid diagnostic test (RDT) that requires no electric power and is optimal for use in the field. The SD BIOLINE HAT RDT has been shown to be more cost-effective than other HAT tests.

By giving health care workers a more accurate, affordable and user friendly tool, we are supporting efforts to eliminate HAT sooner, bring patients to better health through early detection and stop the transmission of the disease.

Meeting future diagnostics challenges: FIND's five-year goals

In each of our disease programmes, FIND has developed a comprehensive five-year strategy to address current needs and respond to future challenges.

Our work in Tuberculosis (TB) and Acute Febrile Respiratory Infections will: cut transmission through early detection; prevent antimicrobial resistance and decrease morbidity and mortality by enabling appropriate treatment through early drug susceptibility testing (DST); enable impact by translating needs of countries into comprehensive solutions for tuberculosis; demonstrate the role of diagnostics in controlling the TB epidemic; and support guidance for use.

Our Malaria and Acute Febrile Syndrome work will: enable global malaria elimination and control of antimalarial drug resistance through development of new tools; improve management of acute febrile patients; maximize impact of existing good quality rapid tests (especially for *P. vivax*); and guide global prioritization of diagnostic solutions for malaria elimination and fever management.

In the field of Hepatitis C, we will: enable affordable and fit-for-purpose diagnostics, increase access to diagnosis; support the prevention of infection; and demonstrate the need and benefit of interventions to support scale-up.

Through our Neglected Tropical Diseases (NTD) Programme, we have identified the following core diseases for our work. The five-year goals for our NTD work include:

For Human African trypanosomiasis (HAT), we will: increase detection of HAT; and facilitate faster, less-burdensome confirmation of the disease through improved tools.

In the field of Chagas disease, our work will: reduce burden of congenital Chagas disease through improved diagnostic solutions; and improve diagnosis of Chagas disease and monitoring of treatment efficacy for chronic patients.

For Buruli ulcer, we will: support the use of improved case finding strategies; and establish diagnostic solutions for early detection of Buruli ulcer close to where people live and facilitate faster, less-burdensome confirmation of disease through improved tools.

In our Leishmaniasis work, we will: reduce burden of leishmaniasis through improved diagnostic solutions; and improve detection and understanding of asymptomatic infections and post-kala-azar dermal leishmaniasis cases in regions targeted for elimination.

We are also setting up objectives and activities to expand our work to soil-transmitted helminthiasis and dengue.

Equality and quality in HIV diagnosis in the Dominican Republic

Despite decades of economic growth in the Dominican Republic, there remain high levels of inequality and an increasing gap between rich and poor. This gap is evident in the unequal access to quality health care, especially among women and children from vulnerable communities. Many poor people are excluded from basic care, as seen in the high levels of maternal and infant mortality, tuberculosis and HIV.

In partnership with the CDC, FIND began assisting the Ministry of Public Health in 2011 to put the National Quality Assurance Policy into practice, with the goal of ensuring a high quality of health care for all people, especially those at risk of tuberculosis or HIV. We joined with the National Reference Laboratory, Laboratorio Nacional de Salud Pública, Dr. Defilló (LNSPDD), to build the capacity of local health care providers for evaluation and performance comparison of HIV rapid diagnostic tests (RDTs) to ensure quality. After a first successful HIV RDTs validation study, a national External Quality Assessment (EQA) programme will now be introduced to ensure high quality of results throughout the country.

Building on our experience from this achievement, FIND will expand this programme in the next two years to include the Rapid HIV Testing Quality Improvement Initiative with the goal of reaching at risk populations in Africa (Ethiopia, Kenya, Uganda, Zambia) and Central Asia.

The FIND/CDC Cooperative Agreement is an example of how innovative partnerships can address social inequalities and provide equitable access to high quality care in developing countries, build up local capacity and instill a strong culture of excellence in laboratories.

How we work

FIND is a non-profit organization, recognized by the Swiss government as an "other International Organization". Our headquarters are located in Geneva, Switzerland, and we have offices in New Delhi (India), Cape Town (South Africa), and Kampala (Uganda), supported by an extensive network of experts throughout the world. We rely on our strong partnerships with the global health community, national health care ministries and industry to be on the cutting-edge of diagnostics development and use. We empower our partners with resources, on-site guidance, technical assistance, disease and market know-how and tailored support to ensure that the most promising technologies reach the people who need them. FIND is committed to maximizing our impact and streamlining our work through transparent monitoring and evaluation of our progress in fighting diseases of poverty.

Partnering for the best solutions

The success of FIND's strategy is ensured by our strong partnerships and collaborations. We increase our impact and efficacy by prioritizing a coalition- and initiative-based approach. An example is our collaboration with WHO, the U.S. Centers for Disease Control and Prevention (CDC), and the African Society for Laboratory Medicine in order to meaningfully improve the quality and sustainability of diagnostics in developing countries. We financially support test developers through our strong relationships with donors and venture capital firms in the global health arena. We also partner with similar organizations to develop a complementary approach to working together.

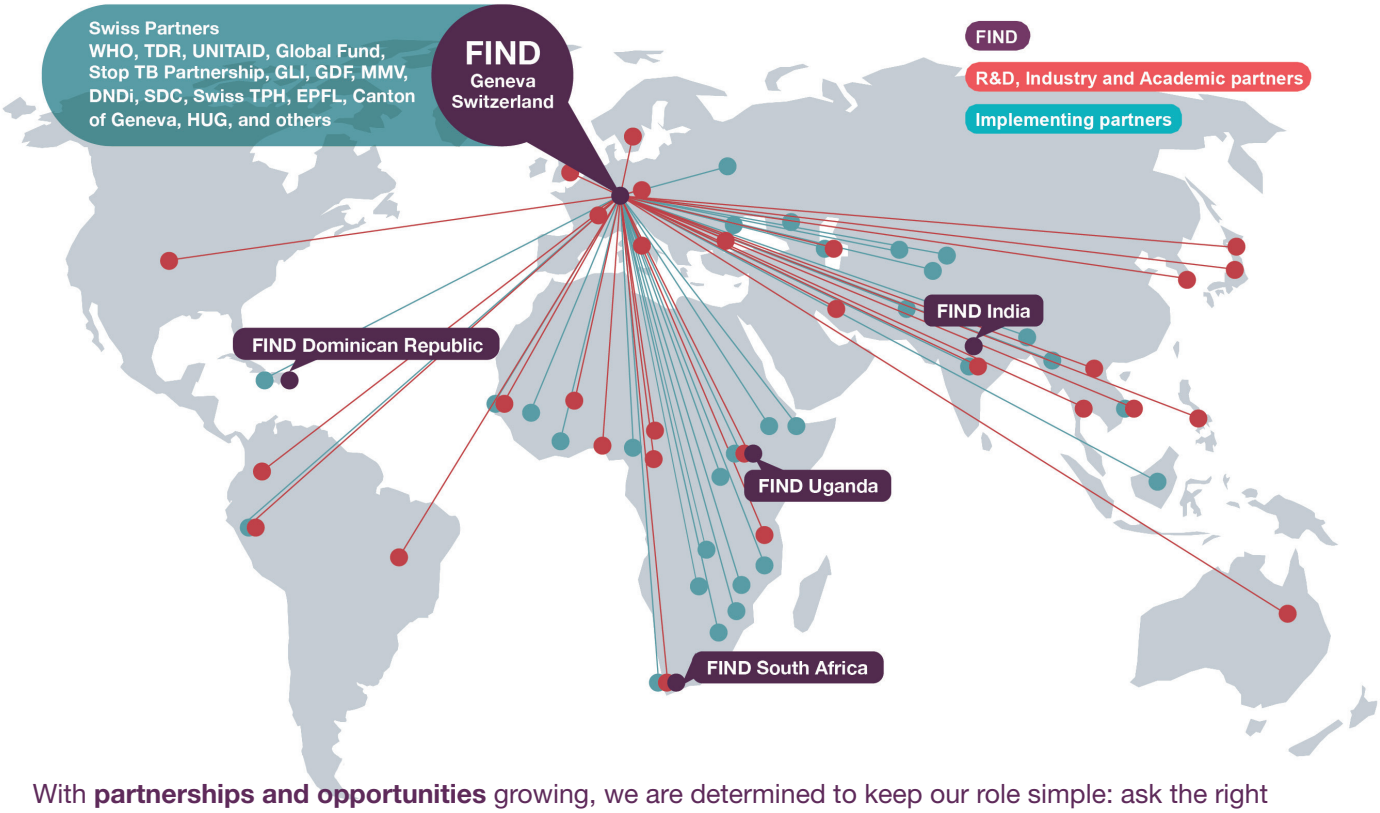
FIND's guiding principles

- Serve as an open platform
- Maintain transparency and communicate openly
- Foster interaction across development and delivery
- Work within output-oriented partnerships
- Aim for sustainability and local ownership
- Remain flexible, responsive and adaptable

A snapshot of FIND's successes

- The Xpert MTB/RIF test enables the molecular detection of TB infection and first-line drug resistance in 90 minutes at a district-level hospital, rather than 120 days at a reference-level laboratory with other methods.
- Six new technologies have revolutionized the detection and treatment of TB and multidrug resistant TB, saving an estimated 300,000 lives per year.
- Through our TB programme, we have built local diagnostic capacity by training 4,400 health care workers in over 360 laboratories and testing sites in 39 countries.
- An improved blood transfer device for malaria rapid tests that overcomes issues of blood safety and improves ease-of-use reached over 100 million patients in 2013.
- Our WHO/FIND quality control programme for malaria rapid diagnostic tests helped reduce the use of substandard rapid tests by the United Nations from 76% to 11 % by the end of 2013.
- The first ever rapid diagnostic test for screening sleeping sickness is in use in ten endemic countries in sub-Saharan Africa, providing an affordable diagnostic tool to eliminate the disease in remote settings and costing only US$ 0.50 per test.
- FIND specimen banks provide valuable resources for the development of diagnostics, including the TB collection with 60,000 aliquots in the form of sputum, serum, EDTA plasma, P800 plasma and urine.

FIND's global presence



With **partnerships and opportunities** growing, we are determined to keep our role simple: ask the right questions, team up for the right answers. That is, after all, the root of diagnostic success.

Our current funding partners
(alphabetical)

- Australian Department of Foreign Affairs and Trade
- Department for International Development (DFID), UK
- Dutch Ministry of Foreign Affairs (DGIS), Netherlands
- Federal Ministry of Education and Research (BMBF) through KFW, Germany
- Government of the United States
- Republic and Canton of Geneva
- Swiss Agency for Development and Cooperation
- The Bill and Melinda Gates Foundation
- The Global Fund to Fight AIDS, Tuberculosis and Malaria
- UBS Optimus Foundation, Switzerland
- UNITAID
- World Health Organization

We believe

Simple, rapid, robust and affordable diagnostic solutions bring game-changing possibilities above and beyond their immediate benefit.

We believe

Our work can make real progress in improving the health of lower and middle income countries and their populations.

We believe

With improved health comes greater hope: individuals empowered to support their families, revive businesses and thrive in school.

Published November 2014

FIND
Because diagnosis matters

Campus Biotech
Chemin des Mines 9 1202 Geneva Switzerland
T: +41 (0)22 710 05 90 F: +41 (0)22 710 05 99

www.finddx.org